Service Quality Expectations

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Stellingen

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Service Quality Expectations
assessment and management

van

Henk Roest

1. Het kan op praktische gronden wenselijk zijn om een ander construct te operationaliseren dan het construct waarin men werkelijk geïnteresseerd is wanneer blijkt dat deze constructen op theoretische gronden aan elkaar gerelateerd zijn en het ene construct toegankelijker is dan het andere construct (Hoofdstukken 2 en 7).

2. Het effect van verwachtingen op waargenomen kwaliteit en tevredenheid is vaak statistisch niet significant. Een belangrijke oorzaak is dat de specifieke verwachtingen die onderzocht zijn in deze studies conceptueel sterk verschillen met de constructen die ze moeten verklaren (Hoofdstuk 3).

3. De kwantiteit en de kwaliteit van keurmerken over de kwaliteit van dienstverlening leiden ertoe dat ze hun functie in de kwaliteitsbeoordeling door consumenten verliezen (Hoofdstuk 4). Keurmerken zouden daarom ook zelf gecertificeerd moeten worden.

4. Terwijl aankoopevaluaties bij diensten vooral plaatsvinden op basis van ontastbare kwaliteitsattributen vinden aankoopbeslissingen bij diensten vooral plaats op basis van tastbare kwaliteitsattributen (Hoofdstukken 5 en 7). Dienstverleners moeten daarom meer aandacht besteden aan het tastbaar maken van ontastbaarheden.

5. Doordat categorieën ontstaan als gevolg van produktprestaties die verschillen in geschiktheid voor gebruik, leveren produkten die prototypisch zijn voor een categorie prestaties die passen bij dat specifieke gebruik. Daardoor impliceert categorie prototypicaliteit tevens produkt kwaliteit (Hoofdstuk 7).

6. Omdat gepercipieerde dienstenkwaliteit gedefinieerd wordt als het verschil tussen de ervaren en de verwachte prestatie is het construct kwaliteitsverwachting een 'contradictio in terminis.'

7. De tevredenheid van consumenten worden vaak slechts vastgesteld, terwijl het eigenlijke doel van dit soort onderzoek meestal is deze te verbeteren. Tevredenheidsonderzoek resulteert daardoor vaak in ontevredenheid bij tenminste één persoon; de opdrachtgever.

8. Bij het doen van wetenschappelijk onderzoek zijn inspiratie en transpiratie wel volledig complementair maar niet volledig compenseerbaar.

9. Tijdens zakenlunches geniet men vaak meer van de prijs dan van de kwaliteit.

10. De afhankelijkheid van ontwikkelingshulp van volkeren zoals de Papuas, de Masai en de Navajo heeft ertoe geleid dat het begrip 'krijger' een tweede betekenis voor hen heeft gekregen. Dit kan de eerste betekenis die het begrip voor hen heeft onacceptabel doen verminderen.

11. Alleen al omdat humor de sociale binding tussen mensen vergroot (McBrien, 1993) en helpt om beter met stress om te gaan (Davidhizar en Bowen, 1992) zouden wetenschappers wat vaker moeten lachen, desnoods om hun eigen werk.

McBrien, R.J. (1993), "Laughing Together: Humor as Encouragement in Couples Counseling," *Individual Psychology Journal of Adlerian Theory, Research and Practice*, 49: 3-4, 419-427.

Davidhizar, R. en M. Bowen (1992), "The Dynamics of Laughter," *Archives of Psychiatric Nursing*, 6: 2, 132-137.

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assessment and management

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Prof.dr. R.G.M. Pieters

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During the five years that I worked on this thesis, several people have asked me what it is like to write a dissertation, as they had no idea. As a matter of fact, when I started this project I didn't have a clue either. Filling 150 pages on a subject within four years seemed like a piece of cake. I was wrong. It is like watching Cas Spijkers (a famous Dutch gourmet) preparing a delicious dish using only ordinary ingredients. It seems so easy, but every time you try it yourself the food turns out to be less attractive and tasteful.
Now I know that doing research is more like composing a seven-course dinner for chef-cooks. Writing a thesis requires a lot of involvement and perseverance, but especially a lot of practice. It also requires the help of many people, to some of whom I would like to express my gratitude.

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For now, I whish you a good appetite!

Henk Roest
Tilburg, May 1998

Contents

Chapter 1
Introduction

1.1 Introduction

One of the most intriguing aspects of marketing over the last decades has been the interest in the quality of products.[1] Mega trends such as the levelling of technology, worldwide structural overproduction, and increased competition in mature markets have resulted in an intensified contest to meet customer needs. These customer needs are no longer dominated by monetary aspects alone but now include other factors like quality, convenience, and fun (Holbrook and Corfman, 1985). As a reaction to these developments, many organizations have adopted quality as a business strategy, and a large number of researchers have studied its effect on business performance ratios and have explored opportunities to manage this strategy. Research on quality management has traditionally focused on tangible products. Recently, the focus has shifted towards service quality as our economies become increasingly service dependent, and it has been recognized that services have some unique characteristics which should be considered in quality research and management.

Although service quality has been defined as a discrepancy between a customer's expectations and perceptions of performance (Lewis and Booms, 1983), it is service performance in particular that has attracted academic interest. Very little is known about service quality expectations and opportunities to manage these expectations. This is remarkable as expectations appear to be important determinants in purchase decision making and evaluations. The aim of this thesis, therefore, is to expand the knowledge in this area. More specifically, it will focus on the consumer assessment of service quality expectations and explore its consequences for service quality management.

This chapter examines the research available on the impact of delivering excellent quality on business performance achievement. Subsequently, a number of theoreti-

1. Products concern both tangibles (goods) and intangibles (services).

cal issues on service quality are discussed. In addition, the importance of managing service quality expectations is emphasized. An outline of this thesis is presented at the end of this chapter.

1.2 Business effects of perceived quality

Whereas quality has traditionally been the domain of production management (Crosby, 1979; Ishikawa, 1982; Schonberger, 1982; Young, 1984; Garvin, 1986), its research focus has shifted more recently towards marketing (for a review, see: Steenkamp, 1989). As a result, conformance to technical specifications or requirements (Juran, 1974; Crosby, 1979) has been outstripped by a fitness-for-use approach, and a superiority or excellence perspective (Zeithaml, 1988). *Perceived* quality has been introduced as a construct to stress that, in this perspective, quality lies in the eyes of the beholder (Garvin, 1984).

A large number of studies have demonstrated the impact of perceived quality on business performances and consumer assessments. In the analysis of such databases as PIMS and TARP, positive relationships have been established between perceived quality and business performance variables such as Return-On-Investment and Return-On-Sales, sales, market share, productivity, and capacity utilization, whereas negative relationships have been established between perceived quality and marketing effort and costs required (Thompson, DeSouza, and Gale, 1985; Luchs, 1986; Buzell and Gale, 1987; Sonnenberg, 1989; Rust, Zahorik, and Keiningham, 1995). Aaker (1992), for example, studying distinctive competences in service organizations, found that perceived quality is the most effective basis for defeating competition and increasing market share. From the consumers' perspective, research has shown that perceived quality is an important antecedent of (re)purchase intention, positive word-of-mouth, customer satisfaction, and loyalty (Churchill and Surprenant, 1982; LaBarbara and Mazursky, 1983; Oliver and Swan, 1989a,b; Cronin and Taylor, 1992; Boulding, Kalra, Staelin, and Zeithaml, 1993; Zeithaml, Berry, and Parasuraman, 1996).

The results of these and other studies may have stimulated the overwhelming popularity of quality as a marketing strategy in business organizations (Porter, 1980; Juran, 1984; Anderson and Fornell, 1994). Employing content analysis on 209 strategic marketing plans of Dutch organizations, Frambach, Verhallen, and

Roest (1995) found that 91% of these organizations claimed that perceived quality was their main strategic issue and competitive weapon.

In reality, however, many organizations do not achieve the targeted prosperous business results (Cottrell, 1993; Povey, 1993). It has been observed that the overwhelming majority of organizations still focus on costs and production management quality and disregard perceived quality or expect it to follow automatically (Turley, 1990). "When you ask to see the quality specialists in most companies, you are still introduced to someone in the production department" (Luchs, 1986, p. 12). Other problems impeding a successful perceived quality strategy include the lack of understanding of what perceived quality really means in the eyes of the consumer, the lack of applicable quality research and analysis, the lack of coordination between internal quality possibilities and external quality desires, the lack of communication, and the lack of commitment of both management and employees (Parasuraman, Zeithaml, and Berry, 1985; Roest and Verhallen, 1993; Walsh, 1995).

1.3 Service quality

Academic research on perceived quality assessment and management has traditionally been performed in the area of tangible products (Olson, 1972; Olson and Jacoby, 1972; Jun and Jolibert, 1983; Buzell and Gale, 1987; Steenkamp, 1989, 1990; Richardson, Dick, and Jain, 1994). More recently, research has shifted to quality perceptions of services (Parasuraman et al., 1985, 1988, 1991a,b; Brown and Swartz, 1989; Zeithaml, Parasuraman, and Berry, 1990; Cronin and Taylor, 1992, 1994; Teas, 1993, 1994; Oliver, 1993). Reasons for this shift include the increasing dominance of services in Western economies (Shugan, 1994) and the recognition that service characteristics like intangibility, heterogeneity, and simultaneity of production and consumption draw heavily on the assessment, measurement, and management of perceived quality (Zeithaml, Parasuraman, and Berry, 1985).

Because services are experiences, rather than objects, the consumer cannot feel, smell or taste them in the same manner in which goods can be sensed. Due to this lack of opportunity to verify services before buying and consuming them, physical intangibility may result in mental intangibility and impede subsequent quality

assessments. Often, consumers may hardly know what to expect of a service and how to evaluate it. Levitt (1981, p. 100) argued that with services "customers usually don't know what they are getting, until they don't get it." As a result, consumers buy ambiguous expectations the organization must but, perhaps cannot or will not, fulfill.
From a management perspective, service production processes and standards are difficult to specify, communicate, control, and maintain. Producers are often unable to provide consistent performance of a service and quality heterogeneity may be inevitable. Heterogeneity is a particular problem for labor intensive services as a large number of different employees may be in contact with an individual consumer (Zeithaml, 1981). As it is produced by the firm's employees and the customer together, service quality not only depends on how well the service provider performs, but also on how well the consumer performs in the service process. As a result, the quality of a service can vary from producer to producer, from customer to customer, and from day to day.

Research has shown that quality assessments occur before, during and after service production in which customers become aware of other options and possibilities (Boulding et al., 1993). As a result of these evaluation and learning processes, perceptions of what is 'fitness-for-use' or 'excellent' may be altered during service production and as consumer expertise increases. Therefore, the service production and its inherent interactions between customers and service employees (i.e., how) must be considered in addition to the service outcome (i.e., what) (Grönroos, 1984). Another problem is that employees are often confronted with multifunctional job descriptions and bear multiple responsibilities that may conflict. For example, a description of a fast-food job includes production (making the food), retail service (delivery to customers), customer service (making sure that these customers enjoy themselves), transaction processing (cashing), and occasionally includes stock management and simple building maintenance (Van Biema and Greenwald, 1997).

1.4 Managing service quality expectations

Despite the agreement that service quality is the discrepancy between two quality components, the bulk of quality research has focused on perceived performance only and has neglected service expectations (Klaus, 1985; Parasuraman et al.,

1985; Bitner, 1990a,b; Bitner, Booms, Stanfield-Tetreault, 1990; Grönroos, 1990; Cronin and Taylor, 1992).

The lack of academic interest in service quality expectations may have been caused primarily by two presumptions. First, some academics have argued that service quality and customer satisfaction are primarily determined by service performance perceptions (and its disconfirmation with expectations), rather than by expectations (Tse and Wilton, 1988; Cronin and Taylor, 1992). Second, it has been argued that assessing and measuring expectations may be unrealistic as people may have no idea of what to expect of services and may be unable or unwilling to assess expectations regarding the service to be encountered. Even if consumers do assess expectations, they may place little confidence in them (Jayanti and Jackson, 1991).

A different perspective on these aspects, however, may stimulate more research on service quality expectations. First, research in the tangible product area has shown irrefutable evidence that expectations are a prime determinant in purchase decision making (e.g., Howard and Sheth, 1969; Goering, 1985; Sweeney, Johnson, and Armstrong, 1992). Research has also shown that expectations may cause forward assimilation processes and influence performance and service quality perceptions (Westbrook, 1980; Pieters, Koelemeijer, and Roest, 1995). In specifying 'will' expectations (estimates) and 'should' expectations (norms), Boulding et al. (1993), for example, found evidence for a direct (but contrasting) effect on service quality. Second, the notion that customers may find it difficult to assess service quality expectations may, in fact, be used as a basic argument to study expectations and try to manage these assessments. Knowledge on what causes the assessment of service quality expectations, what kind of expectations are held, and how they influence purchase decision making and quality (performance) judgments may be used to (re)design services and service production processes, explicate communication towards employees and target groups, and educate customers on how to evaluate services in a profitable way for the provider.

As perceived service quality basically deals with expectations and performances, marketers should study opportunities to manage both. Whereas the management of perceived performances appears applicable in postpurchase evaluation processes, managing quality expectations may also be profitable in prepurchase decision processes. In deciding which product will be purchased, estimates on

how the product will perform are confronted with the norms on how the product should perform, for example to meet certain consumer goals. The central issue of this thesis concerns the use and effect of service quality expectations in consumer decision processes. Using this knowledge on consumer assessments of expectations, opportunities are explored to manage them. More specifically, it will focus on:

The assessment and management of service quality estimates and norms in purchase decision making.

1.5 Organization of this thesis

This thesis presents a number of studies that were conducted to explore the assessment of prepurchase service quality expectations, with a view to facilitating service quality management. Before we explore these assessment and management issues, however, a clear understanding of the exact meaning of the service quality and the quality expectation constructs was needed.

In Chapter 2, service quality as a construct is explored. Using conceptual dimensions, the theoretical differences and similarities of perceived quality with related construct such as perceived product value, customer satisfaction, and product attitude are investigated. Using these dimensions, we also searched for theoretical consensus on the relationships between service quality and these constructs in the literature. This conceptual framework also enabled us to elaborate on consumer expectations in Chapter 3. Whereas the literature shows that consumers may use different types of expectations simultaneously, perceived quality research has specifically focused on the impact of norms, while customer satisfaction research has focused on the effect of estimates. Applying the conceptual framework, the use of these expectation measures in perceived service quality research and customer satisfaction research has been reconsidered.

Using these conceptual studies, four empirical studies have been performed on the assessment of service quality expectations. As our perspective is to generate knowledge for service quality management, especially the use and effect of service cues on quality estimation has been explored. Although some research on cue utilization is already available, these studies have focused on tangible

products. Due to service characteristics like intangibility and heterogeneity, less quality cues are available and quality estimation will be more difficult. As a result, consumers will assess service quality estimates in a less systematic way than when they assess the quality of goods, and these quality estimates will be held with less confidence. Therefore, especially cues that facilitate consumer assessment processes and increase their confidence in such assessments are investigated, as they are likely to be preferred by service consumers. In addition, we have studied how service quality norms are categorized in memory and under which conditions they are used in purchase decision making.

In Chapter 4, an exploratory research is described on the use of quality marks by service management and service consumers. As quality marks (e.g., Michelin stars) are comprehensive judgments provided by a neutral authority, they are considered an important information cue in service quality estimation processes, especially for novices, and in particular with respect to experience and credence services. Due to its comprehensiveness, however, consumers using these quality marks may be unaware of what is actually being controlled and guaranteed by these certifications, and what is not. In Chapter 5, these control and guarantee issues in service quality management are given further consideration through an investigation of the impact of different types of service industrialization which may be used as cues in service quality estimation. As the focus of industrialization is the standardization of services, either through stringent and controllable production procedures or by the replacement of human labor by machines, it may also have an effect on the assessment of service quality estimates, especially on the estimated quality variability, because service heterogeneity may be reduced. It is unclear, however, whether industrialization will also have an effect on the estimated service quality level. As consumer preferences of estimated quality level and estimated quality variability may be dependent on the usage situation, its mediating effect on purchase intention is also investigated. As conditional factors like usage situation and consumer expertise may determine what exactly is service excellence, its effect on service quality norms is established in Chapter 6. These norms may be stored in memory as product categories and be primarily based on experiences of the consumer with multiple brands in the product class. As prototypical category members are expected to perform at the quality level experienced in the service category, knowledge of the extent to which a cue informs about the product category may be important knowledge in assessment and management processes. In Chapter 7, an experiment is reported in which the effect of prototypicality in purchase decision making is examined.

In Chapter 8, the most important findings and implications of this research are summarized, and suggestions for future research are made.

Chapter 2

A Conceptualization of Service Quality[2]

2.1 Introduction

In the past decade, perceived service quality has been a most intriguing topic as reflected by an immense amount of publications on the subject. In particular, the measurement of perceived service quality has attracted substantial academic attention (Parasuraman et al., 1988, 1991, 1994; Babakus and Boller, 1992; Cronin and Taylor, 1992, 1994; Brown, Churchill, and Peter, 1993; Teas, 1993, 1994). A number of measurement tools and procedures have been developed to measure service quality from the consumers' perspective, the most notable being 'SERVQUAL' (Parasuraman et al., 1988) and 'SERVPERF' (Cronin and Taylor, 1992). Less attention has been devoted to the conceptualization of the construct. In particular, the relationship of quality with related constructs may require clarification (see, e.g., Grönroos, 1993; Oliver, 1996).

The definition of a construct is the result of a process of conceptualization and the focal point of its measurement. Broad definitions may be indicative of insufficient conceptualization, and they may lead to suboptimal measurement (cf. Grönroos, 1990). Until now, perceived service quality has been defined as the overall discrepancy between a customer's expectations and perceptions of performance (Lewis and Booms, 1983; Grönroos, 1982). This definition resembles the definition of customer satisfaction/dissatisfaction (Day, 1977; Hunt, 1977), and may be applicable to any postpurchase construct (cf. Oliver, 1980). Also, some researchers (Bitner, 1990; Bolton and Drew, 1991b; Zeithaml, Berry, and Parasuraman, 1991; Bitner and Hubbert, 1994) treat customer satisfaction as an antecedent of perceived quality, while others (Cronin and Taylor, 1992; Rust and Oliver, 1994) argue that perceived service quality is an antecedent of customer satisfaction. Churchill and Surprenant (1982) even suggest that perceived quality is a surrogate for customer satisfaction. Some researchers argue that perceived service

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quality is similar in many ways to an attitude (Olshavsky, 1985; Bolton and Drew, 1991a,b; Bitner and Hubbert, 1994), or as Cronin and Taylor (1994, p. 126) put it, "a long-term attitude," which represents and performs functions similar to those served by product values, while others stress certain differences (e.g., Oliver, 1996).

Recent studies have highlighted the relationships between perceived service quality and other constructs such as customer satisfaction (Oliver, 1993), customer satisfaction and perceived product value (Rust and Oliver, 1994), customer satisfaction and purchase intentions (Taylor and Baker, 1994), and encounter satisfaction and overall satisfaction (Bitner and Hubbert, 1994). These studies focused on the hierarchical and/or empirical relationships between constructs. However, more specific research seems needed to understand the grounds on which the constructs are related, i.e., to specify the conceptual foundations of these hierarchical and empirical relationships (Blalock, 1982). Cronin and Taylor (1994) argue that it may be time for service marketers to arrive at a commensurable agreement about the domains of service quality, consumer satisfaction, and service value. By clarifying and restricting the domains of service quality, consumer satisfaction and other related constructs, our understanding of how these constructs interact in consumer decision making processes might be enhanced. Both research on and management of these constructs might also be facilitated. For example, as service quality seems more under the control of the service organization, knowledge and agreement on what specific grounds service quality is related to customer satisfaction might enable the measurement and management of satisfaction (see Peterson and Wilson, 1992).

In this chapter, a first step is made towards reaching agreement on domains and how related constructs such as perceived product value, product attitude, and customer satisfaction are associated on these domains. These constructs deal with a particular aspect of consumer behavior (i.e., purchasing) but originated in different paradigms, expressing different dimensions on purchase related assessments and decisions.
Using different conceptual dimensions, perceived service quality and its related

constructs are explored.[3] Definitions and conceptualizations used in important contributions in this research area are examined to clarify the constructs, and the literature on these constructs is reviewed to reach consensus about dimensional differences and similarities between them and to clarify their interrelationships.

2.2 Conceptualization

Emphasizing measurement and de-emphasizing the conceptualization of constructs is common in the early stages of development of a discipline (Hunt, 1977). It is a commonplace observation within science that theoretical terms and targets of measurement schemes are often, for long periods of time, understood in only vague or even flawed terms (Snyder and Gangestad, 1986). Subsequently, scientists may experience some obstruction of science development, and recognize the obscurity into which their linguistic practices has led them. As a result, and in a piecemeal fashion, they will make their statements more exact, so that they will at least know what they are talking about (Kitcher, 1985), and a revival of academic interest in the construct may occur.

Conceptualization involves a series of processes in which theoretical constructs, ideas, and concepts are clarified, distinguished, and given definitions in order to reach a reasonable degree of consensus on and understanding of the theoretical ideas we are trying to express (Blalock, 1982). In conceptualizing a construct, its nomological net is of importance. A nomological net is "... the predicted pattern of relationships that would permit naming a construct" (Cook and Campbell, 1979 p. 70). The nomological net is an aspect of construct validity and represents the way in which a construct relates to other constructs and to potential operationalization. The links between theoretical constructs are of interest because, for example, one would like to achieve discriminant validity by specifying what the target construct is not. Such linkages are important as it may be more desirable

3. A few examples might illustrate the importance of using multiple dimensions in defining constructs. Specifying that service quality is the difference between expectations and performance is not sufficient to discriminate service quality from satisfaction. Specifying that product value is a trade-off between benefits and costs is insufficient to distinguish product value from constructs like satisfaction and attitude. Defining attitude strictly in terms of a composition of cognitive, affective, and conative aspects does not preclude that the construct will be confused with a construct like purchase intention.

to operationalize an alternative construct than the target construct if the latter proves relatively inaccessible and if the nomological net indicates that the alternative construct either largely determines or is largely determined by the target construct.

2.3 Constructs and dimensions

First, constructs which are compared to perceived service quality were selected. Second, dimensions used to clarify the commonalities and differences between the constructs were chosen. Third, the extant literature on these constructs was reviewed applying the selected conceptual dimensions.

Customer satisfaction, product attitude and perceived product value seem to be relevant constructs with which to compare perceived service quality. Perceived service quality is often treated as an antecedent or synonym of or successor to these constructs in the literature (e.g., Holbrook and Corfman, 1985; Zeithaml, 1988; Zeithaml et al., 1991; Cronin and Taylor, 1992; Rust and Oliver, 1994). Furthermore, perceived service quality, customer satisfaction, product attitude, and perceived product value follow the same principle of classification (Hanfmann and Kasanin, 1937), i.e., they can be classified as 'consumer and behavioral-based.' The selected constructs are all subjective (i.e., they reside in the customer's mind), and they are expected to drive customer retention and future choice (Rust and Oliver, 1994).

To clarify and compare constructs, it is common to use conceptual dimensions (Holbrook and Corfman, 1985; Oliver, 1993; Holbrook, 1994). As all four constructs deal with (re)purchase decision making (i.e., the acquisition, experience, retention, and future choice of services), six purchase related dimensions were selected for the conceptual analysis and examination of the nomological net of perceived service quality (see: Ajzen and Fishbein, 1977; Fishbein and Ajzen, 1975):

(1) Time. As all four constructs consider the (re)purchase decisions process, a distinction can be made between constructs that are prepurchase and constructs that are postpurchase decision-based.

(2) Basis. As (re)purchase decisions are based on a trade-off between benefits and costs (i.e., monetary and non-monetary sacrifices), constructs may comprise either

'get' or 'give' components, or the trade-off between the two.
(3) Object. As the constructs deal with the interaction of a consumer with a service, they may reflect information about the service (object), or the consumer (subject).
(4) Content. The construct may cover a person's knowledge, opinions, beliefs, and thoughts about the object, held with varying degrees of certitude about what is true or false (cognitive). It may also capture feelings and evaluations of the beliefs (affective), or involve a readiness to act or inclination to respond (conative).
(5) Context. Sometimes assessments are influenced by product and situational factors such as the performance level delivered by competitors. Such relative assessments may be distinguished from absolute assessments that are not affected by such frames of reference.
(6) Aggregation. As consumer buying is often a recurring process, a construct can deal with a transaction (one single episode) and/or the relationship (the aggregation of a diversity of transactions) of the consumer with the product.

To investigate the degree of consensus on the domains of the selected constructs, and to investigate the discriminating power of the dimensions, they were applied to published studies that have had an important impact on the field as indicated by their frequent inclusion in reference lists of other studies, and their inclusion in services marketing textbooks (e.g., Grönroos, 1990; Bateson, 1995; Zeithaml and Bitner, 1996), as well as by the research they stimulated.

Two judges working independently, reviewed the sample of published studies. Each judge determined how the constructs used or discussed in that study were defined or applied with respect to the six suggested dimensions. In the Swan and Trawick (1981, p. 54) restaurant study, for example, customer satisfaction was measured using items such as "the amount of food" (a 'get' component) and "the amount of cost" (a 'give' component, see Table 2.1). The judgments of both judges matched in 84% of the cases. Inconsistencies were resolved through discussion.

Authors	Construct	Time	Basis	Object	Content	Context	Aggregation
Olshavsky and Miller (1972)	quality	post		product	cognitive	relative	transaction
Lewis and Booms (1983)	quality	post	get	product		relative	relationship
Parasuraman et al. (1985)	quality	post	get	product			
Parasuraman et al. (1988)	quality	post	get	product	cognitive	relative	relationship
Hunt (1977a,b)	satisfaction	post		cons to prod	cog+affective	relative	trans+relat
Westbrook (1980)	satisfaction	post		consumer	cog+aff+con	relative	transaction
Swan and Trawick (1981)	satisfaction	post	give+get	consumer	cog+affective	relative	transaction
Cadotte et al. (1987)	satisfaction	post	give+get	consumer	cog+affective	relative	
Fishbein and Ajzen (1975)	attitude	pre	give+get	consumer	cog+aff+con		relationship
Oliver (1980)	satisfaction attitude	post pre+post		consumer	cog+affective		transaction relationship
Oliver (1981)	satisfaction attitude	post pre+post	give+get	consumer cons to pro	cog+affective affective	relative absolute	transaction relationship
Churchill and Surprenant (1982)	satisfaction attitude	post pre	give+get			relative	transaction relationship
Bolton and Drew (1991a)	satisfaction attitude	post pre+post		cons to prod		relative	transaction relationship

Table 2.1 Research Classified on the Conceptual Dimensions

Authors	Construct	Time	Basis	Object	Content	Context	Aggregation
Grönroos (1984)	quality image	post pre+post	get	product cons to prod	cog+affective cog+aff+con	relative	
Zeithaml et al. (1991)	quality satisfaction	post post	get		cog+affective	relative	relationship transaction
Cronin and Taylor (1992)	quality satisfaction	post post				relative relative	relationship relationship
Oliver (1993)	quality satisfaction	pre+post post			cognitive cog+affective	relative	trans+relat transaction
Bitner and Hubbert (1994)	quality satisfaction	pre+post post			cog+affective	relative	trans+relat trans+relat
Holbrook and Corfman (1985)	quality value	post post		product cons+prod		relative relative	
Zeithaml (1988)	quality value	post post	get give+get	product product	cognitive cognitive	relative relative	
Bolton and Drew (1991b)	quality value satisfaction	post post post	get give+get get	product	cognitive cognitive		relationship relationship transaction
Rust and Oliver (1994)	quality value satisfaction	pre+post post post	get give+get give+get	product product consumer	cog+affective		trans+relat trans+relat trans+relat

Table 2.1 Research Classified on the Conceptual Dimensions (continued)

2.4 Nomological net

2.4.1 Introduction

Using the conceptual dimensions, the specific domains of the constructs were examined. Table 2.1 presents the results of the content analysis.[4] Blanks in the table denote that the article does not provide information on the dimension of interest.

Next, each of the constructs is described more thoroughly, uniting them in the nomological net, and providing a synthesis of the findings. The nomological net is displayed in Figure 2.1. A synthesis of dimensions and constructs is presented in Table 2.2.

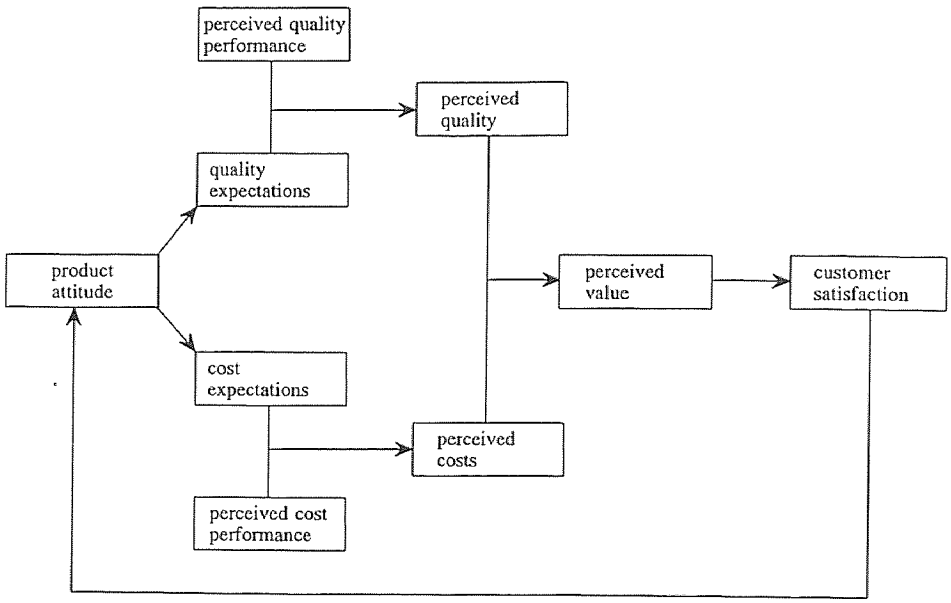

Figure 2.1 The Nomological Net of Perceived Service Quality

4. To gain insight in the communalities between constructs and their underlying structure of meanings, we applied Multiple Correspondence Analysis (MCA), using the program HOMALS as implemented in SPSS. The eigenvalues, the discrimination measures, and the category quantifications support the selection of these six dimensions to conceptualize on perceived service quality and its related constructs.

2.4.2 Perceived service quality

Perceived service quality basically involves the overall discrepancy between a customer's expectations of a service and his perception of performance (Lewis and Booms, 1983; Grönroos, 1984). In order to judge quality before purchase and consumption, quality expectations are formed that act as references for post-purchase quality assessments. According to Grönroos (1984), the consumers' view of the service firm (i.e., its image) influences these expectations. Zeithaml (1988) treats perceived quality as a beneficial attribute and distinguishes it from price, which is what is sacrificed to obtain the benefits. She defines perceived quality as the consumer's judgment of a product's overall excellence or superiority. Service quality assessments can range from 'bad' to 'good.' Although most researchers treat perceived service quality as a cognitive evaluation of multiple attributes, few researchers believe it is (also) an affective judgment (see Table 2.1). While originally perceived service quality expressed a relationship judgment, i.e., an aggregation over a number of transactions (Parasuraman et al., 1988, 1991; Brown and Swartz, 1989), it is currently also used for single transaction judgments (Woodside, Frey, and Daly, 1989; Reidenbach and Sandifer-Smallwood, 1990; Strandvik, 1994). Although perceived quality is generally treated as a postpurchase construct (e.g., Holbrook and Corfman, 1985), some researchers (Oliver, 1993; Rust and Oliver, 1994; Taylor and Baker, 1994) believe that perceived service quality is both a pre- and postpurchase construct, arguing that an interaction with the service is not needed to assess quality.

2.4.3 Perceived product value

In Zeithaml's (1988) means-end model, perceived quality is presented as an antecedent of perceived product value. Perceived value is modeled here as the result of a trade-off between quality perceptions, and monetary and non-monetary sacrifices. Rust and Oliver (1994, p. 10) stated that "... value is equal to the utility of quality minus the disutility of price." Holbrook and Corfman (1985) define perceived product value as an interactive relativistic preference experience. Perceived product value is also generally treated as an overall multi-attribute evaluative product-related judgment (see Table 2.1). Perceived product values can range from 'low' to 'high', and they are based on a variety of specific product-attribute beliefs (Holbrook and Corfman, 1985; Steenkamp, 1990; Sweeney, Soutar, and Johnson, 1997). Like perceived quality, product value is considered on both the relationship (Bolton and Drew, 1991b; Rust and Oliver, 1994) and the transaction level (Rust and Oliver, 1994). According to Holbrook and Corfman (1985), perceived product value is also experience based, as it resides

in the consumption of the (in)tangible product. Hence, perceived product value is viewed as a postpurchase construct.

2.4.4 Product attitude

According to Eagly and Chaiken (1993) an attitude is a general and enduring positive or negative feeling about some person, object, or issue. Attitudes are learned dispositions and are often the result of past and evaluated experiences. Product attitudes are especially useful in expressing the feeling of an ongoing relationship with the product or product category (Oliver, 1980; Holbrook and Corfman, 1985). In addition, product attitudes are considered as the 'coloring filter' in expectation assessments (Bolton and Drew, 1991a), a characteristic also attributed to image (Grönroos, 1984). Unlike perceived service quality and perceived product value, product attitude is a more general conception of a product (Fishbein and Ajzen, 1975; Bolton and Drew, 1991a), and incorporates affective and behavioral components. Consumers may have an attitude towards a product before purchasing it. Product attitude, for example, can be the result of product category experiences, and this affect can be transferred to the unexperienced brand. Some authors, however, believe that product attitude is also a postpurchase decision construct (see Table 2.1). Like perceived product value, product attitudes are based on behavioral benefits as well as on behavioral costs (Verhallen and Pieters, 1984). Like perceived service quality and perceived product value, product attitudes are composed of a diversity of judgments, i.e., they are based on multi-attribute evaluations. Attitudes can range from 'unfavorable' to 'favorable.' Oliver (1981) and Churchill and Surprenant (1982) state that product attitude can be assessed as the sum of customer satisfactions with the various attributes of the product (category) or the service. According to Oliver (1981), product attitudes are absolute.

2.4.5 Customer satisfaction

Customer satisfaction can be defined as "... the consumer's fulfillment response. It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or overfulfillment" (Oliver, 1996 p. 14). Customer satisfaction is characterized by the surprise (Oliver, 1981), the contentment, the pleasure, and/or the relief (Woodruff, Cadotte, and Jenkins, 1983) a customer experiences after a purchase or service encounter. Satisfaction involves both cognitive and affective components (Rust and Oliver, 1994) as it is subject to psychosocial influences such as attributions (Folkes, 1984, Oliver and DeSarbo, 1988),

moods, and equity considerations (Woodruff et al., 1983; Tse and Wilton, 1988; Oliver and Swan, 1989a,b). Satisfaction can range from 'dissatisfied' to 'satisfied.' (Dis)satisfied consumers feel bad or good and therefore a self-evaluation is involved. Customer satisfaction results from the consumer's comparison of rewards and costs of the purchase to the self, relative to anticipated consequences (Churchill and Surprenant, 1982). That is, customer satisfaction entails a trade-off between 'give'- and 'get'-components on a transactional basis (Howard and Sheth, 1969; Swan, Trawick, and Carroll, 1981; Roth and Bozinoff, 1989; Roest, Pieters, and Koelemeijer, 1997), although Bitner and Hubbert (1994) argue that consumers can also be satisfied on an overall basis. According to Oliver (1993 p. 76) "Satisfaction judgments can result from any dimension, quality related or not ..., e.g., an inoperative credit card telesystem is not under the control of the applying organization and thus cannot be considered as a 'quality' dimension." This experience, however, may affect customer satisfaction. As perceived quality on the transactional level may be an input or antecedent of customer satisfaction, the latter construct comprises more than perceived service quality (Anderson and Fornell, 1994; Troye, Ogaard, and Henjesand, 1995). Customer satisfaction is generally treated as a postpurchase construct, because a subject-object interaction seems indispensable (see Table 2.1).[5] Customer satisfaction, like perceived quality, is generally treated as a relativistic judgment (Oliver 1980; Westbrook, 1980; Cadotte, Woodruff, and Jenkins, 1987).

2.5 Towards a consensus

An effective management of assessments on constructs like perceived service quality, product value, customer satisfaction, and product attitude requires a clear understanding of what the construct means to the customer, or as Strandvik (1994, p. 7) put it "... the core concept service quality ... needs to be strictly defined in order ... to be theoretically and empirically useful."

The present analysis indicates that although there is agreement on some domains of perceived service quality and its related constructs, more consensus is needed.

5. Siminitiras, Diamantopoulos, and Ferriday (1996), however, noted an immediate feeling (i.e. emotion) caused by the anticipation of the consumption experience. They have labeled this feeling as pre-purchase satisfaction (e.g. I feel excited that I have booked my vacation for the next summer holiday).

Particularly the dimension 'aggregation' shows mixed results. Some authors claim that service quality is restricted to relationships and view customer satisfaction as an antecedent of quality (e.g., Parasuraman et al., 1991), whereas others argue that quality as a construct is also useful on the transaction level, in which case it is an antecedent of customer satisfaction (e.g., Rust and Oliver, 1994). Table 2.1, however, shows that when the level of aggregation of both constructs is identical, there is less dispute that quality is an antecedent of customer satisfaction.

Whereas some authors have treated customer satisfaction on both the transactional and relationship level (Bitner and Hubbert, 1994; Liljander and Strandvik, 1995), Oliver (1981) disagrees and argues that, in time, customer satisfactions become and resemble product attitudes as the emotion surrounding disconfirmed expectations will be temporal.

While the content analysis reveals that most authors treat product attitude as a prepurchase construct, some treat it as a postpurchase construct as well. It may be argued, however, that although prior product attitudes may be modified by purchase experiences, this does not necessarily imply that product attitude resides in the purchase itself and the product's subsequent consumption, which is the prerequisite for being a postpurchase construct (Holbrook and Corfman, 1985). Hence, we believe it is most fruitful to restrict product attitude to the prepurchase process.

Another dispute in the literature is whether quality is also a prepurchase construct, as argued by Oliver (1993), Bitner and Hubbert (1994), and Rust and Oliver (1994). We agree, however, with Liljander and Strandvik (1992) who have persuasively argued that expected service quality is an estimate of 'a possible future' of this postpurchase construct.

In sum, we would like to propose a delineation of the domains of perceived service quality, perceived product value, product attitude and customer satisfaction, as labelled in Table 2.2. From this perspective, perceived service quality is a relativistic and cognitive discrepancy between expectations and performances concerning service benefits. Perceived quality can be transaction- and relationship-specific and is, with perceived costs, one of the antecedents of perceived product value. Customer satisfaction, on the other hand, is an affective self-evaluation, based on perceived costs and perceived quality trade-offs (perceived product

value) of a transaction.[6] Eventually, customer satisfactions may become or influence product attitude, which may be regarded as an aggregated but not relativistic construct involving a readiness to act, and which might be an input to quality and cost expectations. Figure 2.1 shows the dynamic interrelationships of perceived service quality and connected constructs.

Dimensions	Constructs			
	Perceived Quality	Perceived Value	Customer Satisfaction	Product Attitude
Time	post	post	post	mainly pre
Basis	get	give and get	give and get	give and get
Object	product	product	consumer	consumer to product
Content	cognitive	cognitive	cognitive and affective	cognitive, affective, and conative
Context	relative	relative	relative	absolute
Aggregation	transaction and relationship	transaction and relationship	mainly transaction	mainly relationship

Table 2.2 Dimensions of Perceived Quality and Related Constructs

2.6 Conclusions

In this chapter the meaning of perceived service quality has been explored, applying a theoretical perspective. A clear understanding of and consensus on what the construct is and what it is not, is a prerequisite for measuring that construct and managing it in an unambiguous way.

6. Johnson, Anderson, and Fornell (1995) also distinguish market-level satisfaction. Whereas a transaction-specific view of satisfaction provides valuable insight into particular, short-run product or service encounters, market-level (i.e. cumulative) satisfactions may be a fundamental indicator of a market's current and long-run performance.

As it is believed that there is a specific need to delineate boundaries of constructs, we have tried to clarify the conceptual relationships between perceived service quality, perceived product value, customer satisfaction, and product attitude. Using six conceptual dimensions, i.e., time, basis, object, content, context, and aggregation, we examined the conceptual basis of perceived service quality.

From a theoretical perspective it has been suggested that perceived service quality should be treated strictly as a relativistic (not absolute), cognitive (not affective), product-related (not consumer-related), postpurchase (not prepurchase) evaluation of 'get'-components (not sacrifices), either on the transactional or the relationship level. Based on this perspective, we disagree with earlier claims such as that perceived quality is a "long-term attitude" (Cronin and Taylor, 1992, p. 126), that it is a surrogate for customer satisfaction (Churchill and Surprenant, 1982), that "... service quality is ... likely to be influenced by more variables than satisfaction" (Bitner and Hubbert, 1994, p. 77), that "... quality perceptions do not require experience with the service provider," or that "... satisfaction, in contrast, is purely experiential" (Oliver, 1993, p. 76).
The need to delineate the boundaries of service quality seems high, as recently some researchers have argued that affect (e.g., Oliver, 1993) and costs (e.g., Holmlund, 1997) should be incorporated into perceived service quality. This does not mean that, for example, 'give'- and/or affective components are irrelevant. On the contrary. Yet they are already captured by other constructs such as perceived product value and customer satisfaction/dissatisfaction. These constructs can be managed using the specific relationships they have with perceived service quality, which is a more accessible and manageable construct.

Chapter 3
Service Quality Expectations

3.1 Introduction

Consumer expectations play a central role in consumer behavior as they facilitate both purchase decision and purchase evaluation processes. This central role is expressed in the definitions of both customer satisfaction and service quality in which expectations are compared with experiences and perceptions of performance. Within the customer satisfaction/dissatisfaction literature, consumer expectations are generally defined and measured as pretrial beliefs or estimates about a product's or its attribute's performance (Oliver, 1977; Olson and Dover, 1979; Oliver, 1980; Swan and Trawick, 1981; Churchill and Surprenant, 1982). Within the perceived service quality literature, expectations are extensively treated as what the consumer desires and what a service firm (ideally) should (have) offer(ed), expressing norms held by the consumer (Parasuraman et al. 1988, 1991; Brown and Swartz, 1989; Carman, 1990).

Despite their proclaimed importance and central role, the impact of expectations on quality and customer satisfaction has been questioned on empirical grounds (see Tse and Wilton, 1988; Cronin and Taylor, 1992), and the dominant use of estimates in customer satisfaction research and norms in quality research may be questioned on theoretical grounds.
Cadotte et al. (1987), for example, found that both estimates and norms have an effect on customer satisfaction, and that norms perform even better in explaining variations in customer satisfaction than estimates do. In addition, Boulding et al. (1993) showed that both norms and estimates have an effect on perceived service quality. More specifically, norms have a negative effect on service quality whereas estimates have a positive effect on service quality. Also, the norms used in research may need more specification as they appear to be ambiguous, at least in the eyes of the consumer. According to Teas (1993 p. 21), for example, "... a considerable portion of variance in the response to the Servqual expectation-scale is because of variance in respondents' interpretation of the question being asked." Finally, the norms typically applied in service quality measurement either

as ideal standards (Parasuraman et al., 1988) or as what the consumer desires or perceives as adequate (Parasuraman et al., 1991) may be inappropriate measures as they seem to incorporate affective feelings of the customer (see Chapter 2).

Although conceptual work (e.g., Woodruff et al., 1983) and recent empirical work (Boulding et al., 1993; Pieters et al., 1995) continue to add to our understanding of expectations and how they influence consumers' assessments, more fundamental research in this area seems to be needed.

In this chapter, the literature on estimates and norms is reviewed and their impact on prepurchase decision and postpurchase evaluation processes is explored. Using the six conceptual dimensions, a theoretical framework for measuring expectations in service quality and customer satisfaction research is proposed.

3.2 Expectations as estimates and norms

3.2.1 Introduction

Consumers form expectations for different reasons (Hunt, 1977a; Van Raaij, 1991). First, expectations facilitate decision making as they are best forecasts of future and, to some degree, uncertain events. Second, expectations are thought to create a frame of reference that facilitates judgmental processes, and about which one makes a finite comparative judgment (Helson, 1964; Kahneman and Tversky, 1979). The expectations used in these instances can be subdivided into as estimates and norms.

3.2.2 Expectations as estimates

Consumers usually purchase a product to obtain the bundle of benefits offered by that product. Consumers, however, may not have or may not be able to acquire complete information about these benefits. Therefore, purchase decisions are usually based on estimations of the relevant product benefits (Olson and Dover, 1979; Oliver and Winer, 1987, Tse and Wilton, 1988; Miller and Grush, 1988). That is, future states of nature are consciously anticipated and elaborated by the consumer as pretrial beliefs about a brand or its attribute's performances (Oliver, 1977; Olson and Dover, 1979; Cadotte et al., 1987). Estimates therefore are cognitive (Oliver and Winer, 1987) and active, i.e., they are held in an active memory state (Kahneman and Tversky, 1982).

Estimates may be based on memory about past purchase experiences (Bettman, 1979; Burnkrant, 1978; Surprenant and Solomon, 1987; Alba and Hutchinson, 1987; Ozanne, Brucks, and Grewal, 1992), information obtained from the product itself (e.g., testing, brand, price), the context in which it is found (e.g., retail environment), the people who use it (e.g., other customers, word-of-mouth) (Fishbein and Ajzen, 1975; Meyer, 1981; Duncan and Olshavsky, 1982; Furse, Punj, and Stewart, 1984; Goering, 1985; Cohen and Basu, 1987; Murray, 1991), and learned inferential mechanisms, as often no direct information is provided on the product benefits (for an overview of these mechanisms, see Lee and Olshavsky, 1994).

As estimates are predictions of the focal product's performance, they involve an objective calculation of the benefit level, and an objective calculation of the probability that this level will be attained (Miller, 1977). Estimates therefore also involve uncertainty (Ozga, 1965). Some of this uncertainty may be caused by factors outside the individual (e.g., the weather conditions, or the mood of a service employee) and is called exogenous uncertainty (Pesaran, 1987). Endogenous uncertainty, on the other hand, may arise because consumers know little of their own needs and purchase goals (Deering and Jacoby, 1972), are incapable of perfectly anticipating the behavior and actions of others in the market place (Pesaran, 1987), and usually have to anticipate purchase results and consequences on the basis of the few benefits they can determine in advance (Helson, 1964; Deering and Jacoby, 1972; Darby and Karni, 1973; Einhorn and Hogarth, 1985).
This uncertainty may be affected over time as new experience is gathered, and the future to which the estimates refer becomes less distant (Ozga, 1965). On the one hand, new evidence may sometimes support the initial estimates as it is consistent information, or clarify estimates if the new evidence provides an answer to a question that could not have been answered before. On the other hand, it may make it necessary to revise earlier estimates. Estimates, therefore, are also dynamic as the are updated continually.

3.2.3 Expectations as norms

3.2.3.1 introduction
Research provides some evidence that, over time, fulfilled estimates become standards (Boulding et al., 1993). In that case, expectations are thought to be service norms organizations must fulfill (Grönroos, 1983; Woodruff et al. 1983;

Parasuraman et al., 1985, 1988; Brown and Swartz, 1989). Unlike estimates, norms generally exist as passive assumptions about objects and events (Oliver and Winer, 1987) and are usually not processed until disconfirmed (Bolton and Drew, 1991). Norms reflect what should be or should have been performed instead of what the customer believes (i.e., thinks) will be performed.

A distinction can be made between experience-based norms (Cadotte et al., 1987) and subjective norms (Fazio, 1986). Experience-based norms deal with consumer perceptions of what normally (or typically) is being performed within a service (category) and what should be out-performed by a brand in order to be excellent or superior. Subjective norms deal with what should be offered in order to fulfill the customer's personal needs.

3.2.3.2 experience-based norms

Experience-based norms are primarily based on comparative and competitive perceived performances of services (Prakash, 1984) like the normal (average) or excellent (superior) performance (Woodruff et al., 1983). Such norms are determined by the performance consumers believe is feasible as indicated by one or more brand performances (Cadotte et al., 1987). Experiences with real brands, therefore, set limits on the performance a consumer believes focal brands are supposed to offer.

Consumers may establish these norms in at least two different ways (Sujan, 1985; Alba and Hutchinson, 1987; Cohen and Basu, 1987; Cadotte et al., 1987; Ward, Bitner, and Barnes, 1992). First, the norm may be represented by the typical performance of a particular brand, for example, the consumer's most preferred brand, a popular brand, or last-purchased brand (Kahneman and Miller, 1986). Such brand-based norms may be used when one single brand dominates a consumer's set of brand experiences. Second, the norm might also be an averaged performance a consumer considers as typical for a group of similar brands in a particular product or service category, competing for the same consumer benefits (e.g., fast-food service). Such product-based norms may be operative when a consumer has had experience with several brands within a product class and does not perceive any dominance by one particular brand.

3.2.3.3 subjective norms

Although subjective norms may be based on experience-based norms, they primarily deal with what the consumer desires or thinks he deserves (Prakash,

1984). A number of subjective norms have been distinguished in the literature, the most notable being ideal, desired and adequate norms. These norms are generally applied in service quality measurement (Brown and Swartz, 1989; Carman, 1990) and are, more particularly, the standards used in the Servqual measurement procedure (Parasuraman et al., 1988, 1991).

The consumer's ideal norms are what a consumer wants in an ideal sense (Parasuraman et al., 1988). That is, the optimal product performance a consumer ideally would hope for, or as Miller (1977, p. 76) put it "... the best wished-for level of performance." This reflection of what performance is potential (Levitt, 1980) or 'can be' (Tse and Wilton, 1988), represents enduring customer wants, needs, and values (Prakash, 1984) that remain rather unaffected by the full range of marketing and competitive factors postulated to affect other norms. As such, they are believed to be much more stable over time and to be higher than consumer standards of what really should occur (Boulding et al., 1993). Ideals as expectations can be viewed as perfect states of nature that are perhaps unattainable, unrealistic, and unrelated to what the service provider tells the customer to expect (Oliver, 1993).

Desired norms can be defined as the level at which the customer essentially wants the product or organization to perform (Swan and Trawick, 1981; Parasuraman et al., 1991; Boulding et al., 1993). What 'ought to happen' (Tse and Wilton, 1988) is not only influenced by the customer's own experiences, but also by what he views as reasonable and equitable (Parasuraman et al., 1991). As such, it is a blend of what the customer needs and believes should be and can be attained (Zeithaml et al., 1991). Although these norms seem to be more attainable and realistic than ideal norms, Johnson and Mathews (1997) found that desired norms are closely related to ideal norms in the eyes of the consumer.

Parasuraman et al.'s (1991) adequate norms reflect the minimum performance level required by customers after they considered a variety of individual and situational factors. These adequate norms are related to Miller's (1977) minimum tolerable expectations, defined as the poorest performance acceptable to the customers, including the consumers' subjective evaluation of their own product investment. In effect, the adequate norm is the minimal acceptable level of the desired norm. According to Parasuraman et al. (1991) the adequate service level

is considerably more variable and flexible than the desired service.[7]

3.3 Expectations in pre- and postpurchase processes

3.3.1 Introduction

Next, the usage and effect of consumer expectations in consumer behavior research is examined. Consumer expectations are considered both from a prospective and a retrospective perspective. Whereas prepurchase expectations may be useful in consideration set formation and buying decisions processes, postpurchase expectations are considered to be helpful in making perceived quality and customer satisfaction judgments. Especially the use of expectations in postpurchase evaluations has been studied in the literature. The results of these studies have been mixed.

3.3.2 Expectations in prepurchase decisions

Consumers confronted with a purchase situation may apply a number of criteria like quality, convenience, fun, and price (Holbrook and Corfman, 1985; Zeithaml, 1988) to evaluate and compare the product brands that are offered to them. In order to compare competing brands, brand estimates are assessed on these criteria (Olson and Jacoby, 1972; Steenkamp, 1989; Richardson et al., 1994; Folkes, 1994).

As brand preferences appear to be different across situations, products, and consumers (Deutscher and Hansen, 1977; Bearden and Shimp, 1982; Van Raaij, 1991), it may be argued that norms are assessed and selected on these criteria. That is, norms are selected that fit the purpose of the purchase decision best (Bettman, 1979).[8,9] These norms then are used to verify the brand estimates and

7. The extent to which customers recognize and are willing to accept product heterogeneity is called the zone of tolerance. This zone, representing the difference between desired service and the level of service considered adequate, can expand and contract due to, e.g., equity, experience, price, competition, and urgency conditions (Parasuraman et al., 1991, Strandvik, 1994).

8. Attribute norms should not be confused with attribute salience. Whereas norms deal with the level required by a consumer, salience deals with the effect that attribute has on e.g. purchase intention.

to examine their fit (Fennel, 1978). To the degree that a brand's estimates correspond with the norms applied by the consumer, the brand will be considered for purchase.

3.3.3 Expectations in postpurchase evaluations

Research on the use of expectations in postpurchase judgments has attracted much attention from consumer behaviorists. Expectations (estimates or norms) in this perspective are used as a touchstone or a reference point against which customers evaluate their perceived performances and consumption experiences (Oliver, 1980, 1981; Cadotte et al., 1987; Parasuraman et al., 1988; 1991; Zeithaml et al., 1991). It is argued that once created, this adaptation level (Helson, 1964) serves to sustain subsequent evaluations in that positive and negative disconfirmations with perceived performances will remain in the "general vicinity of the one's original position (Oliver, 1980, p. 461)" and that only large disconfirmations will change the final tone of the subject's evaluation (Oliver, 1981).

A number of studies have empirically investigated the effect of expectations on perceived performances, perceived service quality, and customer satisfaction. These studies, however, show equivocal results. Some studies provide empirical evidence that expectations have an impact on these constructs (e.g., Anderson, 1973; Boulding et al., 1993). Other studies found no such effects (e.g., Carman, 1990).

Although not conclusive, several reasons may be proposed to explain these mixed empirical results. These explanations may be classified according to the product being investigated, the characteristics of the subjects, the measurement procedures applied, and the measures actually assessed in these studies.[10]
(1) Product. Yi and Nassen (1993) argue that for low involvement products, consumers are less likely to pay attention to the current consumption experience, perhaps because they perceive little differentiation in performance or they are not

9. Although there is a vast amount of theory and empirical studies available on quality estimation of tangible products in prepurchase situations (for an overview see Steenkamp, 1989), very little is known about quality estimation of services and what determines the selection of quality norms. We will expand on this in the next chapters.

10. For a review of the psychological processes (e.g. assimilation, contrast, dissonance) caused by these aspects see Yi (1990).

motivated to process the experience in detail. In addition, they state that when products are highly involving, customer satisfaction and perceived quality will be determined primarily by the product performance perceptions.

Expectations may also be overruled when the product or service is purchased because of its epistemic value (e.g., trying a new product) (Sheth, Newman, and Gross, 1991). Then, whenever a product performs 'well enough,' a consumer is likely to be satisfied regardless of the expectation comparison standards and disconfirmation (Tse and Wilton, 1988).

(2) Subjects. According to Johnson and Fornell (1991), experience with the product affects the impact of expectations on customer satisfaction. They argue that when the consumer has limited experience with the product, expectations and perceived performance have an independent effect on customer satisfaction. When there is intermediate experience, both a direct effect and an indirect effect (via perceived performance) may be observed, whereas when experience is extreme, expectations will be equal to perceived performance.

There is also some evidence that both increasing experience and continuing production and consumption processes drive attention from initial and often indistinct expectations to more precise and current experiences with the service (Landy and Becker, 1987), also making a subtractive or subjective comparison between these expectations and performances rather unrealistic.

(3) Measurements. Pieters and Zwick (1993) argue that the effect of prepurchase expectations on postpurchase judgments diminishes when the time-lag between the formation of expectations and experience perceptions is long. Due to long lasting usage, which is common for durables and continuing services, prepurchase estimates, for example, may be forgotten, become passive, and resemble experiences (Fischoff, 1975; Oliver, 1977). When this occurs, consumers may find it difficult to imagine 'how things could have turned out otherwise.' By anchoring their experience, they might even interpret 'prior' expectations this way (Fischhoff, 1975) and postpurchase estimates may be assessed as a result of backward assimilation (Pieters et al., 1995).[11]

(4) Measures. Cadotte et al. (1987) argue that instead of product estimates, customer satisfaction is more likely to be determined by how well a consumer perceives that a focal-brand performance fulfills innate needs, wants, or desires. In line with Cronin and Taylor (1992) they argue that there is no necessary relati-

11. Expanding on this, it might be hypothesized that when the time-lag is long, experiences will drive post-purchase expectations as a result of backward assimilation and when the time-lag is short, pre-purchase expectations drive experience perceptions as a result of forward assimilation.

onship between product estimates and the performance required to meet those needs, wants, and desires. Remarkably, however, Cronin and Taylor (1992) have actually tested the effect of the subtractive disconfirmation (performance minus expectations) on service quality instead of the direct effect of expectations. Their conclusion that expectations have no (direct) effect on quality is therefore questionable.[12]

It is also observed that different researchers use different expectations trying to capture the same construct. Whereas in some perceived quality or customer satisfaction studies prepurchase estimates have been used (Olshavsky and Miller, 1972; Oliver, 1977) in other similar studies some kind of (postpurchase) norms have been measured (Parasuraman et al., 1988; Fick and Ritchie, 1991; Jayanti and Jackson, 1991).

An examination of available studies exploring the direct effect of expectations on either perceived quality or customer satisfaction indicates that some of these explanations may hold whereas others may not. The results in Table 3.1 indicate that there is total consensus on the significance of the relationship between expectations (either estimates or norms) and perceived performance, regardless of the product being studied. Estimates appear to have significant relationships with customer satisfaction and perceived quality when they are measured on the transaction level (i.e., short time-lag between measurements) for low involvement products. There is some evidence that experience-based norms perform even better than estimates in explaining customer satisfaction.[13] However, there seems to be no evidence that subjective norms have a direct and significant effect on either customer satisfaction, or perceived quality of the relationship. Even its indirect effect (via disconfirmation) on perceived quality is equivocal. No studies are available of the effect of experience-based norms on perceived quality.

12. Not only may the effect of expectations have been disturbed by this subtractive disconfirmation, there are also important methodological shortcomings to this approach (Brown et al., 1993; Peter, Churchill, and Brown, 1993).

13. Cadotte et al. (1987) found that the product-type norm, being beliefs about the typical or average attribute possession of all known brands in the restaurant category, performed best in fast-food and in family restaurant settings. The best-brand norm, which is the restaurant in the evoked set respondents considered the best, showed best results in the atmosphere restaurant settings. The brand estimates, finally, did not explain best in one of the three settings.

Authors	Product	Construct	Aggregation	Expectation	Investigated	Significant
Anderson (1973)	pens	satisfaction	transaction	estimates	estimates → performance estimates → satisfaction disconfirmation → satisfaction	yes yes yes
Bateson and Wirtz (1994)	banking	satisfaction	transaction	estimates	estimates → performance estimates → disconfirmation disconfirmation → satisfaction	yes yes yes
Bishop Gagliano et al. (1994)	dress shop	quality	relationship	subj. norms	disconfirmation → quality	yes
Boulding et al. (1993)	hotel	quality	transaction	estimates subj. norms	estimates → quality subj. norms → quality disconfirmation → quality performance → quality	yes (pos) yes (neg) no yes
Bridges (1993)	restaurants	quality	transaction	estimates	estimates → performance	yes
Cadotte et al. (1987)	restaurants	satisfaction	transaction	estimates exp. norms	estimates → disconfirmation exp. norms → disconfirmation performance → disconfirmation disconfirmation → satisfaction	yes yes yes yes
Carman (1990)	prof. center (1) tire store (2) school (3) clinic (4)	quality	relationship	subj. norms	subj. norms → quality (1) disconfirmation → quality (1) performance → quality	no no yes
Churchill and Surprenant (1982)	video player (1) hybrid plant (2)	satisfaction	transaction	estimates	estimates → disconfirmation performance → disconfirmation estimates → satisfaction performance → satisfaction disconfirmation → satisfaction	yes (2) yes yes yes yes (2)
Cronin and Taylor (1992)	banking (1) pest control (2) dry cleaning (3) fast food (4)	quality satisfaction	relationship	subj. norms	performance → quality disconfirmation → quality quality → satisfaction	yes yes (1+4) yes

Table 3.1 Effect of Expectations on Perceived Performance, Perceived Quality and Customer Satisfaction

Authors	Product	Construct	Aggregation	Expectation	Investigated	Significant
Jayanti and Jackson (1991)	hairstyling	satisfaction	transaction	subj. norms	subj. norms → performance	yes
					subj. norms → disconfirmation	no
					performance → disconfirmation	no
					subj. norms → satisfaction	no
					performance → satisfaction	yes
					disconfirmation → satisfaction	yes
Oliver (1980)	vaccination	satisfaction	transaction	estimates	estimates → disconfirmation	no
					disconfirmation → satisfaction	yes
Olshavsky and Miller (1972)	recorder	quality	transaction	estimates	estimates → disconfirmation	yes
					performance → disconfirmation	yes
					disconfirmation → quality	yes
Parasuraman et al. (1988)	maintenance credit cards retail banking telephone serv.	quality	relationship	subj. norms	disconfirmation → quality	yes
Swan and Trawick (1981)	restaurant	satisfaction	transaction	estimates	estimates → disconfirmation	yes
					estimates → satisfaction	yes
					disconfirmation → satisfaction	yes
Tse and Wilton (1988)	record player	satisfaction	transaction	estimates subj. norms	estimates → disconfirmation	no
					estimates → performance	yes
					estimates → satisfaction	yes
					subj. norms → disconfirmation	no
					subj. norms → performance	yes
					subj. norms → satisfaction	no
					performance → disconfirmation	yes
					disconfirmation → satisfaction	yes
					performance → satisfaction	yes
Yi and Nassen (1993)	paper towel (1) wrist watch (2)	satisfaction	transaction	estimates	estimates → disconfirmation	yes
					estimates → performance	yes
					estimates → satisfaction	yes (1)
					performance → disconfirmation	yes
					performance → performance	yes
					disconfirmation → satisfaction	yes (1)

Table 3.1 Effect of Expectations on Perceived Performance, Perceived Quality and Customer Satisfaction (continued)

In sum, these findings suggest that past research may have attached unwarranted importance to subjective norms, and perhaps also estimates, as the standard for perceived service quality and customer satisfaction measurement respectively. Perhaps other types of expectations should have been used in research and might have resulted in better (and more valid) results (Cadotte et al., 1987; Boulding et al., 1993).

3.4 Towards a synthesis

Not only is there empirical evidence showing that some expectations perform better in explaining customer satisfaction and quality assessments than the expectation standards most typically used, there also seems to exist theoretical evidence indicating why other expectations might fit these constructs better.

In order to specify the theoretically most suitable expectations for perceived quality and customer satisfaction research we reviewed the different expectations discussed in this chapter, using the conceptual framework discussed in Chapter 2. The results of this conceptualization are presented in Table 3.2.
(a) The aspect of time has to do with whether the expectation is prospective or retrospective. As estimates are focused on the unknown and future performance of a focal brand, they seem prepurchase directed. Norms, on the other hand, are less time restricted as they are known references in pre- and postpurchase processes.
(b) The aspect of basis deals with what the expectation comprises: give components, get components, or their trade-off. Estimates, experience-based and perhaps also ideal norms are concerned with either give or get components. Desired and adequate norms, however, seem to be an instant trade-off between give and get components as what is 'good enough' to receive will be based on what is offered.
(c) The aspect of object deals with whether the expectation formed is consumer or product related. Whereas subjective norms are expectations that express subjective preferences, estimates and experience-based norms are expressions of predicted and averaged product performances respectively. In other words, whereas the ideal, desired and adequate norms reflect information about the customer, estimates and experience-based norms reflect information about the brand's performance and that of the product category respectively.

(d) The aspect of content deals with the cognitive, affective and conative aspects involved. In this respect, estimates and experience-based norms may be considered as cognitive measures, whereas ideal, desired, and adequate norms (also) involve affective aspects.
(e) The aspect of context deals with whether or not the measure is relativistic. Whereas estimates and ideal norms seem to be absolute measures, desired, adequate and experience-based norms appear relativistic as they are based on comparative product and service offerings, and personal and situational influences.
(f) The aspect of aggregation deals with whether the measure is used for a focal or a global decision. Because estimates involve predictions about one particular brand and one particular transaction they must be treated as a transaction measure. Norms, on the other hand, are more robust across different transactions. They are generally based on more transactions and brands and may be treated and used as a relationship measure, although specific personal circumstances can make subjective norms unique for a single transaction.

Based on the dimensional analysis of both constructs (Chapter 2) and expectations (Chapter 3), we believe that estimates and norms appear to be the perfect pair in prepurchase decisions, whereas norms and performances seem to be the appropriate combination in explaining postpurchase judgments (see also Goering, 1985). More specifically, in service quality measurement, experience-based norms seem appropriate in both pre- and postpurchase assessments.

Dimensions	Estimates	Norms		
		Experience-Based	Ideal	Desired and Adequate
Time	prepurchase	pre- and post-purchase	pre- and post-purchase	pre- and post-purchase
Basis	give or get	give or get	give or get	give and get
Object	product	product	consumer	consumer
Content	cognitive	cognitive	cognitive and affective	cognitive and affective
Context	absolute	relative	absolute	relative
Aggregation	transaction	relationship	relationship	transaction or relationship

Table 3.2 A Typology of Consumer Expectations

As a result of this theoretical elaboration we prefer to define perceived service quality as a relativistic, cognitive, product-related, postpurchase discrepancy between service performances and experience-based norms on get-components.

3.5 Conclusions

Reviewing the literature, it appears that the position of consumer expectations in perceived service quality and customer satisfaction assessments is less clear than the definitions of both constructs might suggest.

A first conclusion is that the suggestion made by Cronin and Taylor (1992, 1994) to exclude expectations as a basic component of service quality should not be followed. Not only may their findings be the result of conceptual and methodological insufficiencies, we also tend to agree with Parasuraman et al. (1994) who argue that the decision to exclude expectations should not be restricted by methodological arguments only, but should also be based on managerial arguments. Measuring service expectations provides important information to the service manager, both in prepurchase and postpurchase situations.

A second conclusion is that the dominant choice of subjective norms and estimates in service quality and consumer satisfaction measurement respectively is at least questionable. Not only is there empirical evidence that other expectation standards fit the conceptual characteristics of these constructs better, there is also theoretical support for altering the expectation standard in service quality and perhaps also in customer satisfaction measurement.
Based on the conceptual analysis, it appears that experience-based norms fit the service quality characteristics better than subjective norms do. In addition, desired and adequate subjective norms appear to correspond better with the conceptual characteristics of customer satisfaction.

A third conclusion is that there has been very little academic interest in the role of service quality expectations in prepurchase assessments. This is remarkable as studying the effect of expectations on assessments like evoked set formation and brand choice is perhaps more rewarding than studying its effect on postpurchase constructs like perceived quality and customer satisfaction. Whereas expectations (estimates versus norms) seem to be the most important determinants in purchase

decision making, performances seem most important in purchase decision evaluations.

Based on the conceptual analysis, two different types of expectations deserve specific attention in prepurchase service quality assessments, measurements, and management: estimates, as they seem useful to compare different brands when choosing the best offer; and experience-based norms, as a standard to compare these estimates with and to verify whether these brands fit the purpose of the purchase decision.

Chapter 4

The Use of Service Quality Marks in Service Quality Assessment and Management[14]

4.1 Introduction

Consumers tend to select the brand that corresponds best with the salient features of the product-use situation (Fennel, 1978; Bettman, 1979). Whereas the exact nature of these features might be clear to the consumer, the extent to which available brands correspond to these features has to be estimated. In order to assess these estimates and to make them feel more confident about their brand choice, consumers rely on different types of product information. These include personal sources (word-of-mouth), commercial sources (advertising), public sources (consumer reports), and experiential sources (product examination and use).
Research shows that the information actually used by the consumer depends on receiver variables such as expertise, uncertainty, and ability, message variables such as complexity and abstractiveness, and source variables such as trustworthiness and effort required to gather and comprehend the information provided (Cox, 1967; Jacoby and Kaplan, 1972; Fishbein and Ajzen, 1975; Burnkrant, 1978; Malhotra, 1982; Duncan and Olshavsky, 1982; Petty and Cacioppo, 1984; Hoch and Ha, 1986; Webster, 1989, 1991; Murray, 1991; Robben and Poiesz, 1993).

Whereas research has shown that personal and experiential sources are preferred in services (e.g., Fishbein and Ajzen, 1975; Murray, 1991), public sources may also be interesting to service consumers when the information offered is expert-based, objective, comprehensive and evaluative (Duncan and Olshavsky, 1982; Miller and Grush, 1988; Murray, 1991; Zeithaml et al., 1991). Consumer reports and quality marks seem to offer such information. A quality mark is a mark on the label of a product which guarantees an often unspecified minimal quality for

14. Based on: Roest, H.C.A and Th.M.M. Verhallen (1995), Quality Marks: Prospective Tools in Managing Service Quality Perceptions, in: Managing Service Quality, 1, P. Kunst and J. Lemmink (eds.), Paul Chapman Publishing Ltd., London, 65-78.

one or more product characteristics controlled by an independent institution (Box, 1979). A consumer report is a special kind of market research by an independent organization which is also responsible for the selection of the brands within a product class and which also determines the test procedure (Thorelli and Thorelli, 1977). Despite its potency, however, research on their use and their effect on service quality assessments is scarcely available, especially on quality marks (Laric and Sarel, 1981).

This chapter focuses on quality marks and its (mis)use in quality management and assessment. After a literature review on service quality dimensions, quality cues, and quality marks, the results of a study on the actual inclusion of salient quality dimensions in quality mark certification, and the results of a consumer study on the perceived inclusion of these dimensions in quality marks are presented. The implications of the empirical findings for service quality management are discussed.

4.2 Service quality dimensions and service quality cues

4.2.1 Introduction

Consumers usually buy products for the benefits offered on salient purchase criteria. These benefits are abstracted from product attributes (Geistfeld, Sproles, and Badenhop, 1977; Gutman, 1982; Reynolds and Gutman, 1984a) and often involve quality perceptions of the product (Holbrook and Corfman, 1985). As such, consumers may compare products based on their perceptions of quality attributes.

Because of the intangible nature of most services, consumers compare different services on a higher abstraction level than they compare differences in goods (see e.g., Burnkrant, 1978). These abstract attributes are often labelled as service dimensions (Parasuraman et al., 1985). According to Johnson and Fornell (1987), such dimensions are continuous attributes on which objects differ as a matter of degree instead of being discrete, which characterizes concrete attributes. Concrete attributes may be used as cues in order to infer these abstract dimensions.

4.2.2 Service quality dimensions

Determining the mutually exclusive and exhaustive set of service quality dimensi-

ons used by the consumer to assess expectations and performance perceptions has been an important topic within the service literature over the last decade. A vast amount of research either stresses the generalizability of a particular set of quality dimensions across service domains (Lehtinen and Lehtinen, 1982; Grönroos, 1984; Parasuraman et al., 1985, 1988; Brown and Swartz, 1989), or stresses its uniqueness within service domains (Carman, 1990; Cronin and Taylor, 1992; Babakus and Boller, 1992; Brown et al., 1993). In general, however, there is agreement that consumers use a limited number of service quality dimensions.
A number of classifications can be found in the literature. A first distinction is between search, experience, and credence (Nelson, 1970, 1974; Darby and Karni, 1973). Search dimensions can be assessed before consumption, experience dimensions can only be verified during consumption, and credence dimensions may never be verified. A second classification makes a distinction between technical and functional quality dimensions (Lehtinen and Lehtinen, 1982; Grönroos, 1984) in which technical dimensions express 'what' is being offered by the service and functional dimensions express 'how' it is being offered. A third classification is developed by Parasuraman et al. (1985, 1988) who distinguish tangibles, responsiveness, reliability, assurance (including: competence, courtesy and credibility), and empathy (including: access, communication, and understanding the customer).

To some extent, these classifications can be integrated. A good example of a credence dimension, for example, is reliability which is perhaps the most important and robust dimensions in and across services (Carman, 1990; Parasuraman et al., 1991). Reliability explicitly expresses the exogenous uncertainty aroused by service heterogeneity or variability (Meyer, 1981; Parasuraman et al., 1985, 1988; Garvin, 1987; Surprenant en Solomon, 1987; Pesaran, 1987; Folkes, 1994; Dabholkar, 1996), and causing endogenous uncertainty (see Chapter 3).
The interaction process between a service provider and a customer expresses the functional quality and has resulted in a number of experience dimensions. Experience dimensions generally found in service quality research include empathy (Parasuraman et al., 1988; Zeithaml et al., 1990), responsiveness (Parasuraman et al., 1985; Carman, 1990) and deliverer's effort (Surprenant and Solomon, 1987; Folkes, 1994). When the service concerns a specific (e.g., complex) task, experience dimensions like competence and professionalism emerge (Parasuraman et al., 1985, Fiebelkorn, 1985; Surprenant and Solomon, 1987; Zeithaml et al., 1990; Bridges, 1993). Such dimensions may express the technical quality of the service (Sweeney et al., 1997).

Dimensions such as tangibles and access may be less experience-based and more search-based (Garvin, 1987; Parasuraman et al., 1985, 1988). Sometimes, tangibles are part of the technical quality, and are occasionally used as cues (i.e., concrete attributes) to infer experience and credence dimensions (Morgan, 1985; Pinto and Leonidas, 1994).

4.2.3 Service quality cues

As information on abstract experience and credence dimensions is often not readily available to the consumer, quality cues (surrogates, tangibles, or features) may be used to assess estimates on these quality dimension (Miller, 1956; Keller and Stealin, 1987; Sujan and Deklava, 1987; Prabhaker and Sauer, 1994). Quality cues can be specified as characteristics that the consumer observes via any of the senses and that are perceived to be diagnostic to determine the quality of a service. Cues are based on dichotomous features that services either have or do not have (Johnson, Lehmann, Fornell, and Horne, 1992) and are effective as they store accessible information on the quality dimensions that often cannot be ascertained prior to consumption (Zeithaml, 1988).
In effect, quality cues are used to estimate quality dimensions and are valued to the extent that they are perceived to be related to these abstract attributes (Steenkamp, 1989).

A distinction has been made between intrinsic and extrinsic cues (Olson, 1972; Szybillo and Jacoby, 1974). Intrinsic cues, such as demeanor of employees and service style (e.g., self-service), are cues that cannot be changed without changing the service itself. Extrinsic cues, such as price and brand name, are not part of the core service but are related to it.
Whereas theory suggests that consumers prefer using intrinsic cues (see Olson and Jacoby, 1972), such cues are often scarcely available in services. Moreover, consumers may be unable or unwilling to infer the quality of services themselves (Duncan and Olshavsky, 1982; Simmons and Lunch, 1991; Broniarczyk and Alba, 1994). As a result, the use of comprehensive and evaluative extrinsic cues like quality marks might be considered in assessing the service quality of a brand. This might be especially appealing for novice consumers and for competitive services that offer variable service quality (Duncan and Olshavsky, 1982).

4.3 Quality marks as a quality cue

Being expert-based and objective, quality marks may offer certain advantages to consumers. Although only few studies are available, they all show that quality marks do indeed enjoy high levels of recognition and are perceived as an important external source of product information (Taylor, 1958; Parkinson, 1975). Schlissel (1986) argues that quality marks are especially valued in services because they provide factual 'warranty' information to consumers. Such warranty information may relax the feeling of uncertainty that is inherent in service consumption. Not only do consumers perceive marks as highly credible, Laric and Sarel (1981) also found that products with a quality mark are perceived as superior to products without a quality mark. Being evaluative and comprehensive, quality marks may be particularly interesting for nonexperts. Novices are less able to understand and evaluate the intrinsic qualities of products themselves (Shimp and Bearden, 1982; Blair and Innis, 1996). Experts, on the other hand, have more confidence in non-personal sources (Murray, 1991; Sweeney et al., 1992) and may use quality marks in a more profound way as they are expected to be more aware of what is actually being certified by a quality mark and what is not.

Although the potential of quality marks in service quality assessment and management seems high, certain assumptions need empirical clarification. An important research questions is whether consumers (experts and novices) have a clear picture of what is being guaranteed by a quality mark and what is not. Answering this research question is important, as a mismatch between objective (management) and subjective (consumer) warranty might result in service quality expectations the service provider is not able or willing to perform. A mismatch might result in bad perceived service quality and dissatisfied customers.
Another important research question is whether quality marks certify those quality dimensions which consumer feel most uncertain about. Answering this question is relevant because consumer are often well able to estimate the search dimensions in services themselves, but are often unable to verify the experience and credence dimensions. Consumers feel most uncertain about these service aspects (Ostrom and Iacobicci, 1995). As a consequence, quality marks are especially valuable in the assessments of credence and experience estimates.
In order to answer these research questions, two studies will be presented in which the use of quality marks from a management and a consumer perspective are investigated and compared.

4.4 Method

4.4.1 Introduction

A first study is conducted to explore which quality dimensions are actually being certified by certification institutions. A second study examined which quality dimensions consumers perceive as being certified by different quality marks. Utilizing the search-experience-credence quality dimension continuum, we differentiated between tangibles, access, responsiveness, courtesy, competence, security, and reliability (Parasuraman et al., 1988; Carman, 1990).

4.4.2 Quality dimensions certified

In the first study, the inclusion of the distinct service quality dimensions in the certification process for known Dutch service quality marks has been investigated. Whereas many different quality marks are used in services, an important distinction has been made between acknowledgments and classifications. While acknowledgments certify a single minimum performance standard, classifications apply multiple minimum performance standards. Classifications are usually expressed by the number of 'stars.' More stars express a higher certified achievement and standard. Based on procedural documents (e.g., brochures and guidelines) provided by the certification institutions, the inclusion of a quality dimension in a quality mark certification process has been established by two judges working independently. The judgments of both judges matched in 88% of the cases. Inconsistencies were resolved by a third judge.

The results are presented in Table 4.1, in which and 'x' indicates that this particular quality dimension is considered in the certification process. The results indicate that quality marks do not guarantee full service quality control by the certification institution. More specifically, whereas tangibles and competence are often included, reliability and responsiveness are often not captured by the quality marks studied.

Business	Quality Marks	Tangibles	Access	Responsive	Courtesy	Competence	Security	Reliability
Wholesale and Retail	"Top- en Keurslager" (butchery)	x	x	x	x	x	x	
	"echte bakker" (bakery)	x		x	x	x	x	
Hotels, Restaurants, Bars	"ANWB hotel classification Benelux"	x	x			x		
	"ANWB hotel acknowledgement"	x	x		x	x	x	
	"ANWB restaurant classification Benelux"	x			x	x		
	"ANWB restaurant acknowledgement"	x	x		x	x	x	
	"Michelin (restaurants)"	x		x	x	x		x
	"KNAC (automobile)"	x		x	x	x		x
	"Alliance Gastronomique Neerlandaise (restaurants)"	x	x		x	x	x	x
	"Lekker'90 (restaurants)"	x		x	x	x		x
	"Neerlands Dis (restaurants)"	x			x	x		
	"Tourist Menu (restaurants)"					x	x	
Repair and Service	"Bovag (car repair)"	x				x	x	x
	"ANWB acknowledgement"	x				x	x	
Professional Service Rental Services	"ANWB acknowledgement (bike rental)"	x				x	x	
	"Bovag (car rental)"	x				x	x	x
Culture, Sports, Recreation	"ANWB classification campings"	x	x			x	x	
	"ANWB acknowledgement campings"	x	x		x		x	x
	"ANWB classification bungalows"	x	x				x	
	"ANWB acknowledgement equestrian sports"	x	x				x	

Table 4.1 Quality Dimensions Certified by Quality Marks (source: Roest and Tijssen, 1991)

4.4.3 Quality dimensions perceived

4.4.3.1 method

In order to investigate whether there is a mismatch between the service quality dimensions actually certified by a quality mark and those perceived as being certified by consumers, an empirical study was conducted among subjects drawn from the Dutch population. The respondents were randomly selected using address registration from available telephone books. A mail questionnaire was developed and used to assess the use of quality marks in selecting hotels and restaurants in general, and to assess awareness, knowledge and expectations on the quality dimensions involved in two specific service quality marks in particular. Hotels and restaurants were selected as it was expected that they offer variable quality levels,[15] that customers differ in expertise with respect to these services, and as different quality marks are available in these services. The Benelux hotel star classification (ANWB) and the Michelin restaurant star classification were selected as they are well known among consumers in the Netherlands and they differ significantly in the extent to which they cover the distinct service quality dimensions (see Table 4.1).

The net response was 156 completed questionnaires (44%), and 57% of the respondents was female. Stated reasons for visiting restaurants and hotels were mostly private (e.g., with family and for leisure).

4.4.3.2 results

The results of this study indicate that consumers generally prefer personal and third-party experiences when purchasing hotel and restaurant services. Whereas quality marks and word-of-mouth are most frequently used by hotel consumers, word-of-mouth and own experiences are important when selecting restaurants (see Table 4.2).

To test whether quality marks are indeed preferred by novices as an information source, expertise was measured by asking frequency of visit of hotels and restaurants respectively. A five-point scale was used ranging from (1) at least once a week .. to .. (5) less than once a year.

15. Note that in the Netherlands most hotels and restaurants are private enterprises. Relatively few hotels and restaurants operate in franchise.

The results of the Mann-Whitney U-test show that compared to novices, experts prefer the use of quality marks most when assessing the quality of both hotels ($p = .01$) and restaurants ($p = .02$).

Information (source)	Hotel (%)	Restaurant (%)
Quality Marks	42	9
Word-of-Mouth	40	68
Price List	38	33
Personal Experience	29	78
External Appearances	26	31
Advertisements	13	12

Table 4.2 Information Usage in Hotel and Restaurant Selection

To determinate whether there is a mismatch in quality dimensions actually certified and the quality dimensions perceived as certified, respondents who were familiar with the Benelux hotel classification ($n = 114$) and the Michelin restaurant classification ($n = 58$) were selected respectively. These respondents were asked which of the seven distinct quality dimensions they believed are being certified by the Michelin quality mark (the Benelux quality mark). The question for the Michelin mark was worded as: "On which of the following quality dimension(s) do you think a restaurant will be inspected in order to achieve a Michelin quality mark?" Next, the selected quality dimensions were presented. In order to facilitate the interpretation of the abstract dimensions, they were explained by concrete examples. Access, for example, was clarified by stressing: "Access includes aspects like: location, opening hours, telephonic accessibility, accessibility for disabled persons, and parking lots."

The results of both the perceived and the actual certification of the quality dimensions by the two quality marks are presented in Table 4.3. These results indicate a significant mismatch. Especially the Benelux hotel classification shows significant misperceptions. In particular, on 4 out of 7 quality dimensions a misperception of 50% or higher was observed, meaning that the majority of the respondents have wrong expectations regarding the certification of the quality di-

mensions in this mark.[16] For the Michelin restaurant quality mark, the results are slightly better although serious misperceptions have been found there also.

Quality Dimensions	Benelux hotel stars			Michelin restaurant stars		
	perceived (%)	certified	mismatch	perceived (%)	certified	mismatch
Tangibles	78	yes	22	67	yes	33
Access	46	yes	54	36	no	36
Responsiveness	55	no	55	83	yes	17
Courtesy	27	no	27	45	yes	55
Competence	50	yes	50	93	yes	7
Security	68	no	68	47	no	47
Reliability	40	no	40	41	yes	59

Table 4.3 Quality Dimensions Attributed to Quality Marks

Generally, no significant differences regarding these mismatches were found between respondents who do employ and respondents who do not employ quality marks as an information source in brand selection (as established in Table 4.2). Only the quality dimension competence for the Benelux hotel mark shows a significant difference in the proportion between users and non-users of quality marks. Surprisingly, however, the proportion of 'not included' is significantly larger (CI=.95) for users (59%) than for non-users (30%), whereas competence is actually included in the certification process of this quality mark.

4.5 Discussion and limitations

Being objective, evaluative, comprehensive and expert-based product evaluations, quality marks may be regarded as promising tools for managing service quality estimations. They may be especially useful in services that do not provide consumers the opportunity to assess experience and credence dimensions personally by inspection and before trial. Significant differences, however, have been observed between perceived and actual coverage on these dimensions by different

16. The average number of misfits was 2.46 (σ=1.18) for restaurant consumers and 3.15 (σ=1.29) for hotel consumers.

quality marks.

Studying what information (sources) consumers actually use when selecting services it was found that quality marks were preferred in purchasing hotel services whereas in purchasing restaurant services they were not. Apparently, as consumers generally are not able or capable of judging the quality of a hotel personally before purchasing it, the expert-based evaluative information provided by quality marks seems desirable. Restaurant visitors, on the other hand, may attach less importance to credence dimensions than hotel visitors do and more on search dimensions. Moreover, restaurants are usually visited in the consumer's own residence. This allows the consumer to evaluate both internal (personal brand experience) and external information (e.g., word-of-mouth, and external cues like equipment and facade). As a result, the information provided by quality marks may offer less extra informational value to these consumers. When, however, personal and experiential sources are not available to service consumers, quality marks may be preferred and used as a second-best source of information, especially by experts.

Answering the first research question, it appears that consumers generally have no idea of what a quality mark stands for. Significant mismatches have been observed between the service quality dimensions actually being certified by an independent party and the quality dimensions inferred or perceived as being certified by a quality mark. It also appears that those who use quality marks as an information source in purchase decision making do not have a better understanding of what is being certified (controlled and guaranteed) by a quality mark than consumers who do not use these marks. The observation that consumers expect more from quality marks than they can prove may negatively affect service quality and satisfaction assessments.
Answering the second research question, it appears that quality marks do not cover all service quality dimensions. More importantly, experience and credence quality dimensions are often excluded in the certification process. Remarkably, quality marks include easy certifiable quality dimensions such as tangibles and access. These dimensions, however, are also rather easy to verify by consumers themselves using more accessible information sources such as the list of opening hours.

As a result of these findings it might be concluded that quality marks do not fulfill their potential in providing the consumer with information that is not already

provided by other and more accessible sources. More importantly perhaps, it might be concluded that quality marks seem to mislead those consumers who employ them, as wrong quality expectations are aroused. On the other hand, it should be noted that consumers may have learned that brands holding quality marks perform well on certain quality dimensions despite the (unknown) fact that these dimensions are not certified by the quality mark.

4.6 Managerial implications

The findings of this research have implications for both the service brand manager employing the quality mark and the certification institutions.

As quality marks are easily misunderstood by consumers, they should be employed with the greatest caution trying to manage service quality assessments. Preferably they should only be used when the quality dimensions that the consumer thinks are being certified can be performed at the perceived minimum level. On those dimensions, a minimum level of performance must be guaranteed whether or not they are included in the certification process. As misperceptions and differences in perceptions exist, quality marks should be communicated in conjunction with other brand related information. Such integrated communication is especially important as other research has shown that consumers believe that carrying a quality mark implies that advertising claims are true and that a brand with a quality mark is better than a brand without it (Laric and Sarel, 1981).

Quality mark institutions may have to reduce the number of quality marks, as consumers may not be willing or able to distinguish the number of quality marks already available to them. As most quality marks focus on different quality dimensions and use different standards, consumers may get confused. Whereas quality marks are supposed to reduce the uncertainty feeling of consumers, this factor may actually increase this negative feeling. In general, quality marks should include all experience and credence dimensions relevant in services. Not only as those dimensions are difficult to estimate by the consumer personally, but also because the need for reliable information on those dimensions is high. Perhaps some standardization measurements and norms (e.g., ISO-9000) might be used in this process. If the inclusion of all quality dimensions is not desirable or feasible, strict communication is required on what is excluded in the quality mark.

Chapter 5

Service Industrialization and Quality Estimation[17]

5.1 Introduction

Due to the real-time production and consumption of services and the human factor involved in their production, services are frequently characterized by high degrees of performance variability (Zeithaml et al., 1985). As perceived variability seems to be an important and intrinsic quality factor in services, it is important that service managers attend to it, in addition to the management of the service quality level.

Although 'good service' is often translated as 'more personalized service' as more service options become available (Bateson and Wirtz, 1994), the variability and complexity of services also increase (Cooper and de Brentani, 1991). In the eyes of the customer, this variability can mean a lack of consistency, perceptions of unreliability, heightened consumer risk, and poor service quality (Shostack, 1977; Lovelock, 1983). To the extent that providing more options forces the customer to expend mental and financial resources in a situation where such exertion is not desired, quality estimation and purchase intention may be adversely affected and may in fact cause irritation (Surprenant and Solomon, 1987). This observation supports the argument that under some conditions, predictability is more essential to service consumers than is personalization (Bateson, 1985; Teas, 1993; Kotha, 1995). Ostrom and Iacobucci (1995), studying consumer trade-offs and evaluations of experience versus credence and low versus high critical services, found that for less critical experience services, standardization of service provision may be more attractive to customers than customization. According to Cooper and de Brentani (1991, p. 77) this urges the need "... for solutions including pre-assembled service packages, the replacement of labor by capital, and the introduction of planned work systems," i.e., service industrialization (Levitt, 1976).

17. Published as: H.C.A. Roest, T.H.A. Bijmolt, and R.G.M. Pieters (1997), Industrialization of Services and the Management of Quality Expectations and Purchase Intention, Managing Service Quality, 3, P. Kunst and J. Lemmink (eds.), Paul Chapman Publishing Ltd., London, 131-147.

Industrialization of services is attracting much attention in service industries nowadays because it makes service delivery processes more efficient and transferable (e.g., by franchising) (Lee, 1987). Besides controlling internal production processes, service industrialization may also have an effect on external quality perceptions, especially in services where the consumer is part of the production process.

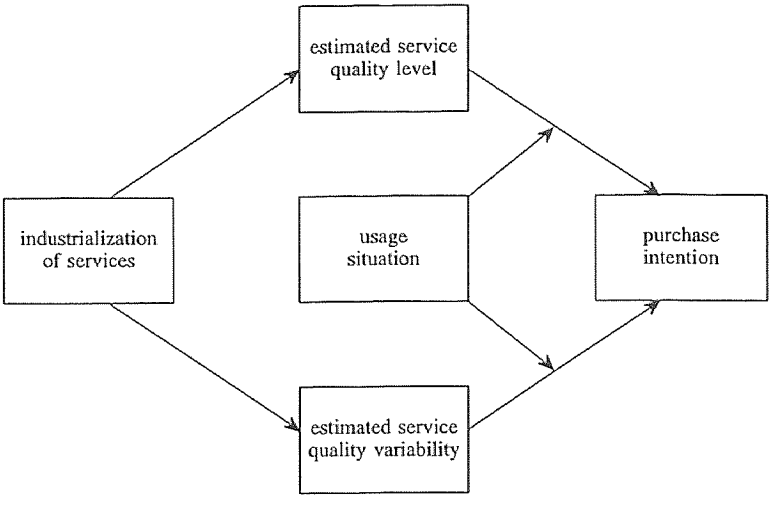

Figure 5.1 Relationships Between Service Industrialization, Estimated Service Quality and Purchase Intention

This study examines the effects of service industrialization on service quality estimation. Whereas most research on service quality estimation has focused on the estimated service quality level only, this study also focuses on the estimated service quality variability as an integral but often neglected component of consumer estimation (see Chapter 3). In addition, the effect of these service quality perceptions on purchase intention, and the role of usage situation as a mediator is studied as it is an important determinant of purchase and choice motivation (Fishbein and Ajzen, 1975; Miller and Ginter, 1979; Mattson, 1982). Hence, situational variables might be of importance in research on the effect of estimated service quality level and estimated service quality variability on quality related constructs like purchase intention (see Figure 5.1). Finally, the implications for marketing practice are discussed.

5.2 Industrialization as a quality cue

In the current literature, industrialization is generally treated as an instrument to optimize production efficiency (Levitt, 1976). It is argued that the replacement of employees by machines (hard technology) and the streamlining of procedures (soft technology) will result in higher productivity. Industrialization is also discussed from a production management perspective, arguing that it gives the service provider the unique opportunity to reduce the extent to which employees exercise judgment in meeting individual customers' needs, and to standardize service characteristics (Lovelock, 1983). Making the service process more concrete and industrializing it, provides the service employees with specific production standards to maintain. According to Blackman (1985), management can attain greater control over the employee's attitudes and actions by imposing visible structure on the surroundings the service employee uses to provide the service. As a result, the service delivery will conform more to requirements (Crosby, 1979) and service production variability may be reduced.

Expanding on these thoughts, it is possible that industrialization is also a prospective instrument to manage consumer perception processes (Teas, 1993). Industrialization of service components by redesigning, standardizing and explicating the service delivery process, and by creating visual images (i.e., cues) to identify it, can make a service more perceptible to the customer. By doing so, industrialization can provide concrete cues to prepare users for the actual service, giving them visual, procedural, and psychological suggestions to define a reasonable set of expectations for the service process. In effect, industrialization may lead to more stable, confident and predictive service quality assessments. By standardizing menu selection, for example, and preparing these menus in a standardized way, the quality of food at McDonalds is almost invariable, both from the management's and the customers' perspective.

The proposed visual, procedural and psychological clues can be related to industrialization of intrinsic and extrinsic service components. Industrialization of intrinsic components -e.g., the replacement of bank-cashiers by automatic teller machines- means that the core service will change, whereas the industrialization of extrinsic components -e.g., all crew members of a retail-chain wear company uniforms (Rafaeli, 1993)- will not affect the core service.

Whereas perceived variability reduction through the industrialization of extrinsic cues may be clear, the effect of industrializing intrinsic parts of the service on perceived quality variability seems less evident. Participation of the customer as a means of industrialization (Levitt, 1976), for example, might cause role conflict and role ambiguity of both the customer and the service provider and may obstruct (and even reverse) the intended variability reduction. Another issue is whether or not industrialization will effect the perceived quality level. Especially when personalization and customization is service-intrinsic (Calantone, Vickery, and Droge, 1995), industrialization might lower the perceived quality level.

A first research question, therefore, is whether intrinsic and extrinsic service industrialization have a different effect on the estimated service quality level and estimated service quality variability.

5.3 Usage situation as a mediator in purchase decision making

Many products and services are used in a variety of situations. Foods are selected for everyday family consumption, for guests, or for holidays; movies are selected for viewing with dates or with children. Sarris and Parducci (1978) observed that experiences with products or services in various usage situations create situational perceptions that act as reference points when the situations arise again and products or services are (re)evaluated. Bridges (1993) found evidence that such reference points or usage motivations, influence preferences of products or services judged for purchase and use in that situation. Apparently, usage situations motivate consumers to search for specific services and brands that meet the requirements (i.e., norms) of that current situation (June and Smith, 1987; Cadotte et al., 1987; Murray, 1991; Bridges, 1993; Fodness, 1994). Miller and Ginter (1979), for example, found that usage situation (e.g., lunch on a weekday versus evening meal with the family when not rushed for time) influences both attribute importances and behavioral intention levels of specific brands. As such, similar quality estimates may be valued differently in different usage situations. Whereas research on distinguishing usage motivations is absent (see Chapter 6), it may be argued that at least two usage situation motivations are important in this perspective namely time motivation and psychosocial motivation (see Miller and Ginter, 1979; June and Smith, 1987). Although their distinct effect on service preferences and choice has still not been investigated in the literature, research on

these effects seems important as the explicit consideration of such situation related variables may increase our understanding of the effect of prepurchase quality expectations in consumer behavior.

A second research question is whether the effect of estimated service quality level and estimated service quality variability on purchase intention is mediated by the usage situation of the consumer.

5.4 Method

5.4.1 Service selection

Four principal considerations guided the selection of the service: (1) the service should provide appropriate deviations in quality estimations due to exogenous circumstances; (2) the service and its components should appear in a diversity of configurations (i.e., offerings and brands) in the marketplace; (3) the service should be appropriate for use as a stimulus on a population of available subjects such that at least some experience with the service is guaranteed; and, (4) the service must be applicable to (visible) industrialization. Taking these considerations into account, restaurants seemed to be an appropriate choice for this study.

5.4.2 Design and subjects

The research questions are investigated using scenarios and a questionnaire approach in a 2 (time) x 2 (psychosocial) x 2 (profile sets) between-subjects x 4 (profiles) within-subjects fractional factorial design. A scenario approach was preferred over a field study as it would be difficult to isolate the cues we wanted to manipulate, and subjects would be reluctant to complete an extensive questionnaire on the spot (cf. June and Smith, 1987; Murray, 1991; Dabholkar, 1996). Usage situation was manipulated on two choice motivating factors. Time motivation was controlled experimentally by stressing that the subject was supposed to visit the restaurant either in a hurry or without time constraints. Psychosocial motivation was controlled by stressing that the subject was supposed to visit the restaurant either alone or with close friends. This resulted in 4 usage situations: (1) in no hurry and accompanied by others, (2) in no hurry and alone, (3) in a hurry and accompanied by others, and (4) in a hurry and alone. As it was intended to manipulate five different quality cues (salad bar, counter, clearing of table, uniform, and bill) on two levels (industrialized versus not industrialized), 32

different restaurant profiles emerged. Because we were primarily interested in main effects of cues, 8 profiles were extracted (Addelman, 1962). In order to alleviate the subjects' task, the design was split into two sets of four profiles each. Each subject was confronted with 4 out of 8 profiles and was assigned to respond to 1 out of 4 usage situations. Exhibit 5.1 shows an example of a scenario. Responses were collected from randomly selected subjects from a pool of undergraduate students enrolled in advanced marketing classes at a mid-size university in The Netherlands. As 367 students participated, 1468 observations distributed over 8 different questionnaires were obtained.

Cue manipulation:	
"You intend to visit a restaurant. This restaurant has the following characteristics":	(1) a salad bar where you can select your own salad, and (2) a counter where you can order and pick your menu, and (3) the employees wear a company uniform, and (4) after your dinner you are requested to clean your own table, and (5) after dinner you get a bill from a cash register
Situation manipulation:	
"... Imagine that you are":	(1) in a hurry, and (2) not accompanied by other people.

Exhibit 5.1 Example of a Scenario

5.4.3 Scenarios and manipulation checks

To investigate the impact of intrinsic and extrinsic service industrialization cues on service quality perceptions, three intrinsic and two extrinsic service production components were chosen. All three intrinsic service components involve customer participation (cf. Levitt, 1976): (1) salad bar: the restaurant has a salad bar at which customers can prepare their own salad versus having it prepared by a food service employee; (2) counter: the restaurant has a counter at which food can be

ordered versus table service; and (3) clearing the table: after dinner, the table is supposed to be cleared by the customer versus having the employee clear it instead. The two extrinsic service components selected were: (1) company uniform: personnel do versus personnel do not wear a company uniform; and (2) bill: after dinner, customers receive a bill from a cash register versus they are given a hand-made bill.

In order to test the manipulations of the service components, 60 students classified the five service components into an intrinsic-extrinsic cue dichotomy. The results show that to a large extent, the students classified the industrialization cues as intended (company uniform: 95.0%; counter: 98.3%; salad bar: 88.3%; bill: 93.3%; clearing of table: 98.3%). Eighty percent of the subjects classified all five cues as intended.

5.4.4 Measures and procedure

Estimated quality level was established by confronting the subjects with two statements "I think that the quality of the food in this restaurant is: (1) very bad .. to .. (9) very good" (technical quality), and "I think that the service in this restaurant is: (1) very bad .. to .. (9) very good" (functional quality) in each of the manipulated restaurant configurations. Estimated service quality variability (quality reliability) was assessed by confronting subjects with "I think the quality of the food that this restaurant offers will be different from time to time and over different encounters: (1) strongly disagree .. to ..(9) strongly agree," and "I think the quality of the service that this restaurant offers will be different from time to time and over different encounters: (1) strongly disagree .. to .. (9) strongly agree" (see Pesaran, 1987).

Purchase intention was measured by the statement "In this usage situation, this restaurant would fit me: (1) strongly disagree .. to .. (9) strongly agree" (see Holak and Lehmann, 1990; Taylor and Baker, 1994).

Questionnaires were delivered personally to the subjects' desks in a classroom. Subjects were briefed about their task in which they were requested to assess quality estimations and purchase intention under different scenarios. Total time for completion of all tasks averaged less than half an hour. Each person who completed the questionnaire participated in a lottery in which four gift vouchers of 25 Dutch guilders were raffled.

5.5 Analyses and results

The analyses and results are presented following the two research questions. First, it was examined how both components of quality estimation are affected by different types of industrialization. Next, the effect of these components on purchase intention and the mediating effect of the usage situation was determined.

industrialization and service quality estimations

Regarding industrialization of services as a potential instrument for managing service quality estimations, it was investigated how different kinds of industrialized service components affect the estimated service quality level and its estimated variability. Estimated quality level and estimated quality variability were calculated by averaging the answers on the two corresponding items (Cronbach's α were .77 and .73 respectively).
Using these measures, the mean ratings of the estimated quality level and the estimated quality variability for each of the five indicators of service industrialization were computed (Table 5.1). The MANOVA F-value for these data is significant for both the estimated service quality level ($F_{5;1445}=100.21$, $p<.01$) and the estimated service quality variability ($F_{5;1453}=8.51$, $p<.01$). The correlation between both estimation constructs is -.31.

Nearly all effects of the indicators, as presented in Table 5.1, are significant, with the exception of the effect of the salad bar and of the counter on the estimated service quality variability.

The overall pattern in Table 5.1 is quite clear. A salad bar, a counter, and clearing the table yourself all tend to decrease the estimated service quality level. Having to clear your own table as a quality cue also tends to increase the consumers' estimated service quality variability. The effects of a salad bar and a counter on this quality perception component, however, are not significant. Uniform clothing and a cash register bill tend to increase the estimated service quality level and to decrease the estimated service quality variability.
Answering the first research question, it appears that the industrialization of intrinsic components lowers the estimated quality level, and the industrialization of extrinsic components lowers the estimated quality variability and raises the estimated quality level.

Industrialization Cues	Estimated Quality Level			Estimated Quality Variability		
	Industrialized		p-Value	Industrialized		p-Value
	yes	no		yes	no	
Intrinsic:						
Salad bar	6.10	6.28	.04	4.07	3.91	.11
Counter	5.75	6.63	.00	4.06	3.92	.16
Self Clearing of Table	5.56	6.82	.00	4.20	3.79	.00
Extrinsic:						
Company Uniform	6.42	5.96	.00	3.78	4.21	.00
Cash Register Bill	6.31	6.07	.00	3.89	4.10	.03

Table 5.1 Effects of Industrialization on Estimated Service Quality Level and Estimated Service Quality Variability

service quality estimations and purchase intention

To answer the second research question, a multiple regression analysis was carried out in which purchase intention is explained by the estimated service quality components and the mediating role of usage situation.

The regression equation in Table 5.2 accounts for 17.3 percent of the variance in purchase intention ($F_{8,1421}=37.3$; $p<0.01$). Moreover, most of the individual parameters are significant. Estimated quality variability has a small but significant negative effect on purchase intention. This effect does not depend heavily on situational characteristics. The effect of estimated quality level on purchase intention is also significant but differs substantially across various usage situations.[18] To facilitate the interpretation of the interactions, Figure 5.2 visualizes the relationships between estimated service quality level and purchase intention in different usage situations. The figure shows that time motivation has a much stronger impact on the estimated service quality level - purchase intention relationship than psychosocial motivation. When the usage situation changes from in a hurry to no hurry, the negative coefficient changes into a positive coefficient. When the usage situation changes from alone to company, the coefficient changes into a positive direction, but does not change into a positive coefficient when the consumer is still in a hurry.

18. Note that in the situation of selecting a restaurant being alone and in a hurry, estimated quality level has a negative effect on purchase intention. Apparently, high performance restaurants are undesirable in such situations. When the usage situation is different, this negative effect of estimated service quality may be compensated by significant interaction effects (see Figure 5.2).

Effect	Parameter Estimate	s.e.	Beta	t-Value	p-Value
Constant	10.83	.53		20.31	.00
Perceived Quality Level (A)	-.72	.07	-.49	-10.94	.00
Perceived Quality Variability (B)	-.11	.06	-.09	-1.96	.05
Time (C)	-7.58	.61	-1.58	-12.48	.00
Company (D)	-3.49	.61	-.73	-5.75	.00
A x C	1.14	.08	1.56	15.06	.00
A x D	.44	.08	.61	5.89	.00
B x C	.06	.06	.06	.96	.34
B x D	.11	.06	.11	1.78	.07
R^2adj. .17					
$F_{8;1421}$ (p) 37.3 (.00)					

Usage situation was coded as follows: time motivation (C): 0 = in a hurry, 1 = no hurry; and company (D): 0 = alone, 1 = with company.

Table 5.2 The Effects of Estimated Service Quality and Usage Situation on Purchase Intention

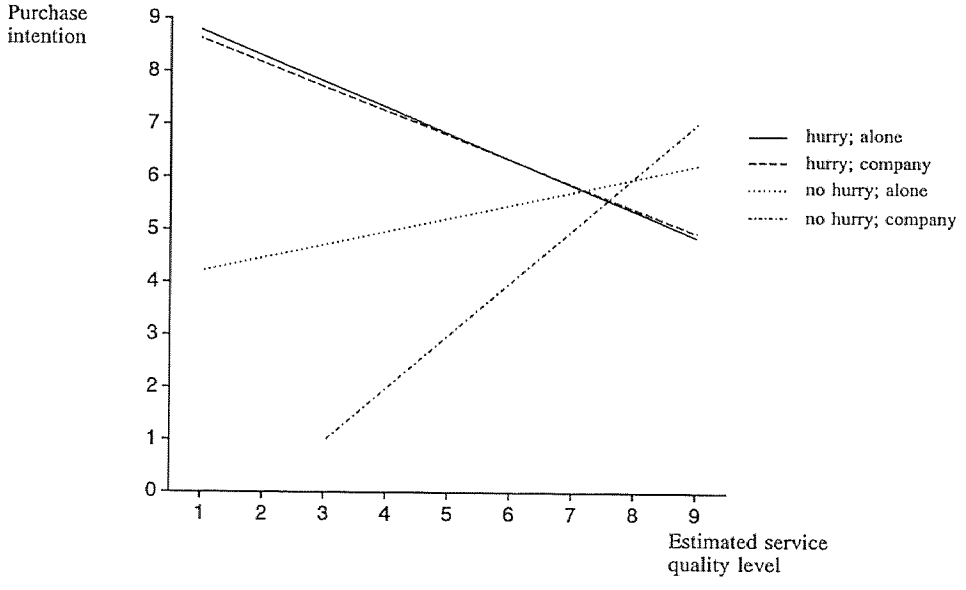

Figure 5.2 The Conditional Effect of Estimated Service Quality Level on Purchase Intention

5.6 Discussion and limitations

The results of this study demonstrate that industrialization of services does not necessarily lower estimated quality variability. In addition, it might also affect the estimated service quality level. More specifically, it is found that industrialization of extrinsic (i.e., non-core) service components lowers estimated service quality variability but also increases the estimated quality level. That is, industrialization of extrinsic components gives the consumer information that the performance level will be higher and that the performance variability will be lower than when they are not industrialized. On the other hand, industrialization of intrinsic (core) service components decreases the estimated quality level and might increase the estimated service quality variability, as observed for clearing of table.
An explanation for this finding is that in restaurants the interaction process between employees and customers is regarded as a basic aspect of services, as indicated by other studies on service quality dimensions (Solomon, Surprenant, Czepiel, and Gutman, 1985; Parasuraman et al., 1988; Carman, 1990). When this interaction is reduced, the level of benefits received and the quality delivered apparently decrease in the eyes of the customer. As intrinsic industrialization of services will often involve some kind of customer participation, factors like role ambiguity may cause additional variability and uncertainty.
Another (partial) explanation might be the selection of subjects. Stimuli like a salad bar or clearing your own table might trigger a categorization schema of fast-food restaurants, which most of the students are highly familiar with. Instead of inferring each stimulus separately, they may have treated them as prototypical cues (see Chapter 7). Such cues trigger a schema in which past experiences with comparable restaurants are gathered and structured. This bundle of experience-based norms may have been used as a reference for the quality perception assessments. Fast-food restaurants generally tend to deliver rather low quality levels. On the other hand, this argument cannot explain why clearing your own table has a significant effect on perceived quality variability whereas salad bar and counter do not.

This study also supports earlier findings that quality perceptions and usage situation are meaningful determinants for predicting purchase intention (e.g., Miller and Ginter, 1979; Zeithaml et al., 1996). The mediating effect of specific usage situations on the relationships of both estimated service quality level and its estimated variability on purchase intention has been investigated. The results

indicate that all antecedents have a significant relationship with purchase intention. Also, several highly significant interaction effects have been found. If the subject is alone, the estimated quality level has a negative effect on purchase intention, whereas if he has company he prefers a higher service quality level. The time factor has an even stronger effect. If the subject has no time constraints, the effect of the estimated quality level on purchase intention is positive. However, when the consumer is in a hurry, estimated service quality level has an adverse effect on purchase intention, and other decision criteria may become more important. In this respect, the data indicate, to some extent, a trade-off between estimated quality level and estimated quality variability. In the restaurant business this would imply that in some situations a fast-food restaurant (low estimated quality level and low estimated quality variability) corresponds best with the consumer's purchase goals (e.g., when the consumer is in a hurry and is not accompanied by others).

5.7 Managerial implications

The findings of this research may be relevant for service managers who try to manage customer quality estimations. Although it seems reasonable to assume that industrialization desirably leads to more stable, confident, and predictive service quality assessments, the results of this study suggest the need for a more careful approach. They show that the effects of industrializing extrinsic service components on service quality expectations differ substantially from the effects caused by industrializing intrinsic service components. Following the implicitly accepted 'rule' that managers should lower quality variability expectations as it causes uncertainty (Levitt, 1981; Meyer, 1981; Johnson and Levin, 1985; Cohen and Basu, 1987; Jaccard and Wood, 1988; Ross and Creyer, 1992), only extrinsic components should be industrialized as industrializing intrinsic service components may not have the intended effect. Disputing this rule we found some evidence that higher quality variability expectations may be acceptable or even be preferable to consumers (see also Oliver and Winer, 1987; Bateson and Wirtz, 1994).[19] That is, standards or norms on quality variability and quality level may not be the same for all usage situations. This study indicates that both time and psychosocial

19. Sometimes consumers might even prefer high variability over low variability, for example, when a customer has epistemic consumption goals (Sheth et al., 1991).

motivation influence the preferred quality level and its tolerable variability in purchase decision processes. This implies that the service manager may not only have to work on a coherent quality cue management. He may also have to verify the specific benefits desired at the moment of consumption and discover which customer motivations are salient when purchasing a service, and what causes them. Taking these motivations as a starting point may help the service manager to build more adequate service portfolios. One example of this approach is the idea of redesigning Dutch railway stations into small malls in which commuters can order their groceries in the morning, which they can pick up in the evening when returning to their homes. Although there seems to be no relationship between travelling and shopping, they certainly share the motivational aspect of time.

Chapter 6

The Effect of Usage Situation and Expertise on Service Quality Norms Selection

6.1 Introduction

Based on the premise that consumers buy products whose benefits conform best to their specific needs, product attributes and service dimensions play a pivotal role in purchase decision making as they may offer the benefits valued and searched for by the consumer. Whereas a vast amount of research is available on product attributes (Olson and Jacoby, 1972; Jun and Jolibert, 1983; Steenkamp, 1989), the set of service dimensions (Parasuraman et al., 1985, 1988; Carman, 1990; Cronin and Taylor, 1992; Brown et al., 1993; Lapierre, Filiatrault, and Perrien, 1996), and opportunities to manage performances and estimates on these attributes and dimensions (Day and Bodur, 1978; Zeithaml et al., 1985; Parasuraman et al., 1992; Sweeney et al., 1992; Roest et al., 1995; 1997), relatively little is known about consumer benefits and what makes them required and selective. More knowledge on these may be valued, especially as they are used as evaluation norms in, for example, purchase decision making and quality and satisfaction assessments.

Several theoretical suggestions have been made about the determinants of norm selection in quality and satisfaction assessment. Suggestions include task and product importance or involvement, the availability and variability of service alternatives (brands), expectations of an affiliated party, product familiarity and expertise, emergency or recovery situations, and communications (Swan and Combs, 1976; Day, 1977; Fennell, 1975, 1978; Woodruff et al., 1983; Crane and DeYoung, 1990; Parasuraman, et al. 1991; Zeithaml et al., 1991; Teas, 1993). Little empirical evidence, however, is available on the actual effect of these hypothetical determinants on quality norms.
Perhaps the only study available concerns a number of focus group interviews conducted by Parasuraman et al. (1991). This study provides some evidence that emergency and service-failure situations tend to raise specific quality norms used by consumers. They also claim that more experienced consumers generally have

higher norms, arguing that experts have more to compare with.

In this chapter, the effects of usage situation and expertise on service quality norms are examined. The basic idea is that consumers in different usage situations and with different levels of expertise might use different service quality norms and may consequently benefit from identical service performance (estimates) differently. Being interested in experience-based norms (i.e., quality norms), a categorization approach is applied as these norms are usually stored and clustered in memory as categories (Barsalou, 1983, 1985; Ozanne et al., 1992). That is, it is also examined how different service quality norms are associated with different service categories and how usage situation and expertise are related to service category selection.

First, the literature on product categorization is explored. Next, the literature on usage situation and expertise is reviewed. An empirical study in the restaurant business is discussed in which the effect of usage situation and expertise on quality norms selection is investigated. In conclusion, implications for service management are discussed.

6.2 Categorization and quality norms

Consumers are continuously confronted with an almost endless number of apparently different object stimuli and subsequent experiences. As a reaction to this, consumers form categories in memory enabling an efficient understanding and processing of the environment (Fiske, 1982; Sujan, 1985). Such categories are based on the degree of equivalence which is determined by the extent to which objects share a set of characteristics like features and attributes.

As consumers store information in memory simultaneously at different levels of abstraction (Tolman, 1932; Gutman, 1982; Olson and Reynolds, 1983), equivalence may be determined at different levels of comprehensiveness (Rosch, Mervis, Gray, Johnson, and Boyes-Braem, 1976; Nedungadi and Hutchinson, 1985; Sujan and Deklava, 1987; Peter and Olson, 1993). The basic-level is the level at which a number of attributes are shared by all or most members of the category and are most differentiated from other categories (e.g.; birds have feathered wings to fly whereas mammals do not) (Rosch, 1978; Alba and

Hutchinson, 1987). Superordinate categories are more comprehensive than this basic-level and generally share only a few attributes among each other (e.g.; not all animals have wings, but those that have are not necessarily birds). Subordinate categories are less comprehensive and contain many attributes that overlap with other categories but are different on the attribute levels (e.g.; birds of prey have larger wings than poultry birds) (Jones, 1983; Aha and Goldstone, 1992). From a linguistic perspective, Rosch et al. (1976) suggest that, on the basic-level, people generally use a single sign as a label for identification (birds), whereas on the subordinal level multiple sign sequences are used (bird of prey).

A distinction can be made between common or taxonomic and ad-hoc or goal-directed categories (Barsalou, 1983, 1985). Taxonomic categories are those commonly used by members of a culture to classify phenomena such as 'animals,' 'birds,' 'fruits,' and 'vegetables.' Goal-directed categories are occasionally created as, for example, in 'things to take from one's home during a fire.' In those categories, the items are related to goal achievement and may be physically dissimilar and initially not associated with each other in memory (Hoffman, 1986; Loken and Ward, 1990).

Although theory would suggest that consumers have well established category representations in memory for taxonomic categories only, Ratneshwar and Shocker (1991) showed that consumers are able to define category representations in goal-directed instances as well. Such representations may especially be observed when products and goals are processed frequently by consumers (Barsalou, 1983), or when their category structures are actively created on the basis of their judgments of product substitutability across different usage contexts. Categories may be represented as either concrete or abstract in memory. Representation as an abstract set of rules for identifying instances of the concept, category, or class, generally include necessary and sufficiency conditions, defining and characteristic features, and simple frequency of occurrence information for attributes across known exemplars in the category (Alba and Hasher, 1983; Peter and Olson, 1993). Alternatively, people may have a concrete and specific image of the 'exemplar' or 'prototypical' concept instance (Sujan, 1985; Alba and Hutchinson, 1987). Exemplars are known, good examples of the category, whereas prototypes are images embodying dimensions or attributes most commonly associated with members of the category but probably not possessed by any particular exemplar in conjunction.
Although it may be argued that especially in difficult task environments and with

sufficient complex concepts, subjects may fall back on categorization through memorization of concrete exemplars (Brooks, 1978 in Cohen and Basu, 1987), Mervis and Rosch (1981) concluded their literature review by stating that more abstract models are preferred and that they provide the best results in categorization research.[20]

In general, it may be argued that categories include hypotheses about the usual values, their importance weights, and the variability across brands on the shared attributes and dimensions (Meyer, 1981; Sujan, 1985; Alba and Hutchinson, 1987; Sujan and Bettman, 1989; Ward et al., 1992, Ozanne et al, 1992). Apparently, they deal with coherent clusters of experience-based norms stored in memory, i.e., their level, salience, and relationships (Woodruff et al., 1983; Cadotte et al., 1987; Ozanne et al., 1992; Kahneman, 1992). Consumers use these categories and norms to attend to information, interpret and infer meanings, solve problems, set goals, or select a behavior (Kahneman and Miller, 1986; Hoffman, 1986; Cohen and Basu, 1987; Ward and Loken, 1986; Loken and Ward, 1990; Ozanne et al., 1992; Folkes, 1994).

6.3 Usage situation as a quality norm determinant

There is empirical evidence that the explicit consideration of situation-related variables reduces the unexplained variance of constructs in consumer behavior research and increases its managerial value for product positioning decisions (Belk, 1974, 1975; Schmitt and Shultz II, 1995). Empirical studies have established the impact of the situation on emotional and mood characteristics (Lutz and Kakkar, 1975), consumer buying preferences (Srivastava, 1979), and purchase attribute importances (Miller and Ginter, 1979; June and Smith, 1987; Bridges, 1993).
As it appears that the activation of different consumer goals is evoked by characteristics of the usage situation task or context (Kahneman, 1992; Kahneman and Miller, 1986), there is reason to believe that usage situation may also affect the service quality norm selection, and the selection of the most appropriate

20. Research shows that consumers' choice between abstract schemas, prototypes, and exemplars depends on factors like use frequency, recency, intensity, area, duration, distinctiveness and higher order aspects like meaningfulness, familiarity, ego-involvement, and salient goals (Kahneman and Miller, 1986; Cohen and Basu, 1987; Ozanne et al., 1992; Folkes, 1994).

service (category and brand) offering these norms. That is, the usage situation may determine what exactly service excellence is in the eyes of the consumer.

Within this perspective, Heckhausen's (1977) cognitive model of achievement motivation is relevant. This model maintains that the effects of situations on consumer behavior by means of motivational factors must be related to the consequences of the action involved. Following this idea, it is very well possible that consumers prefer a particular product to the extent that the consequences of buying and consuming that product correspond with the goal specifications (and norms) of the usage situation. That is, the way consumers view the product-use situation sets the direction for their product search and evaluation (Srivastava, 1979; Bodenhausen and Wyer, 1985). This approach has intuitive appeal as it directly addresses the question of why consumers behave as they do. The notion that consumers in different usage situations consider and buy different products might, therefore, be explained by the idea that they are motivated by a different range of perceived consequences (Schary, 1971).

Several clusters of consequences, or motivational domains (Weiner, 1986), have been proposed that appear to contrast with Belk's (1975) classification of physical surroundings, social setting, time, task definition, and antecedent states.[21] According to Gutman (1982), consequences may be physiological in nature (e.g., satisfying hunger), psychological (e.g., self-esteem), or sociological (e.g., enhanced status). Katz's (1960) typology comprises four general categories: ego-defensive, knowledge, utilitarian or reward maximization, and value-expressive functions, to which Smith, Bruner and White's (1956) social-adjustive function (Fodness, 1994) can be added. Another potential framework is provided by the perceived risk literature. In this research area, six conceptually independent (Jacoby and Kaplan, 1972) risk consequences are distinguished: financial, performance, psychological, physical, social, and time (Cunningham, 1967; Roselius, 1971; Schary, 1971; Peter and Tarpey, 1975).

21. Application of motivation-domain frameworks in consumer research seems interesting as: (1) they are not specific to modalities (subjects or objects) thereby allowing comparison of responses to different types of stimuli; and (2) they can be differentiated according to affective tendencies (Sorrentino and Short, 1986) of both hope of success and fear of failure (Heckhausen, 1977; Feather, 1982; Weiner, 1992). In addition, and more particularly, they seem useful as these frameworks make it possible to unravel real-life usage situations (e.g., quick lunch with business associates; June and Smith, 1987 incorporating time and psychosocial domains), and to determine more generalizable and causal effects.

6.4 Expertise as a quality norm determinant

Research also shows that consumer expertise has an important effect on consumer behavior. Research on the effect of expertise has particularly focused on perceived risk (Dowling and Stealin, 1994), information search (Furse et al., 1984; Brucks, 1985), and inference processing (Bettman and Park, 1980; Sujan, 1985; Bettman and Sujan, 1987; Cohen and Basu, 1987; Arnthorsson, Berry, and Urbany, 1991). As quality norms are determined as experience-based, differences in levels of expertise may also affect the establishment of norms in memory and the selection of norms in purchase situations.

A few studies support the idea of expertise as a norm determinant. Parasuraman et al. (1991), conducting group interviews, noticed that expertise causes an increased desired service level. They argued that experts have more to compare with than novices. As such, expertise might explain why a consumer may initially be quite satisfied with a French restaurant, but becomes dissatisfied with this restaurant as expertise with respect to restaurants increases (Levitt, 1976; Goering, 1985). Landy and Becker (1987), studying job satisfaction, found some evidence that increased levels of expertise changes attribute salience. There is also some evidence that, eventually, experts' cognitive dimensional structures may be altered and become more refined (Bettman and Park, 1980; Conover, 1982; Alba and Hutchinson, 1987; Johnson and Mervis, 1997) and that experts may distinguish more product categories than novices do within the same product class (Walker, Celsi, and Olson, 1987).

Alba and Hutchinson (1987) state that expertise is directly related to knowledge and is usually the result of experience. Consumer experiences, however, may be related to a brand, a product category, or a product class (Woodruff et al., 1983; Zeithaml et al., 1990). The literature indicates that expertise is linked to the knowledge of product categories and its basis appears to be the ability to solve problems through the rapid recognition of these categories (Sujan, 1985; Lee and Olshavsky, 1994; Johnson and Mervis, 1997). As a consequence, expertise should be treated as a degree of knowledge and experience across different categories within a product class (cf. Alba and Hutchinson, 1987).

Whereas a number of determinants have been suggested that may have an impact on service quality norm selection, usage situation and expertise seem important

from a theoretical perspective. A study in the restaurant business was conducted in order to investigate these suggestions empirically.

6.5 Method

6.5.1 Introduction

In this section, the effects of usage situation and expertise on the selection of experience-based quality norms is explored. Next, the service selection, the sample, and the operationalization of the measures are discussed.

6.5.2 Service selection

Restaurants were selected as the service industry for two reasons. First, as we are interested in differences in norms on a fixed set of dimensions, a service was needed of which most consumers have at least some experience and knowledge, within and across service categories. Within-category experience was required as we are interested in experience-based norms. Across-category experience was required to facilitate the comparison of distinct service norms between categories within the service class. Second, as we are interested in (goal-directed) categories, we needed a service that appears in the marketplace in different ways and is used for a variety of reasons. The existence of a wide variety of restaurants and the popularity of dining out almost ensures that consumers have stored distinct and specific categories in memory (Ozanne et al., 1992; Kahneman, 1992).

To specify the restaurant categories that consumers actually distinguish and use, 16 video-taped consumer interviews were conducted. Each respondent was asked to categorize photographs taken from a wide variety of restaurant interiors, exteriors, menu cards, and quality marks. In this natural grouping task, the respondents were allowed to make as many piles as they thought was necessary (cf. Walker et al., 1987). After allocating all the pictures they were asked to label the piles, each of them representing a different category (cf. Urban, Hulland, and Weinberg, 1993). In general, five restaurant categories were distinguished; atmosphere restaurants, bistros, road-side restaurants, lunchrooms, and fast-food restaurants.

6.5.3 Sample

A consumer panel of visitors of 15 different restaurants in two mid-size cities in

The Netherlands was recruited. The restaurants selected were distributed equally over the five categories. All the restaurants were located close to or inside a shopping mall with competition across and within its own category at a close distance. This selection procedure makes it reasonable to assume that the restaurant actually chosen by the respondent was expected to perform (at least) in accordance with the quality norms sought.
Data were collected using a self-administered questionnaire that visitors leaving the restaurant were asked to complete at home and return in a freepost envelope to a postoffice box address within 7 days. In the accompanying letter, respondents were told that for every fourth completed and returned questionnaire a gift voucher of 25 Dutch guilders would be remitted to them. The net response was 40% which resulted in 480 respondents. Their age averaged 44 years, 48% was male. On average, 1.7 persons accompanied respondents on their visit.

6.5.4 Measures

Before the respondents were asked to respond to questions concerning categories and norms, they were asked about the name of the particular restaurant they had visited and two local restaurants in the same category, the respondent's company, and the food items ordered. These questions were asked to create a situation in which respondents were reminded of the dinner occasion to elicit more realistic answers and to circumvent the overall-first versus attribute-first measurement bias (see Moorthy, 1991).

usage situation

Consequences of the usage situation were measured using different motivational domains. These domains concerned financial, performance, psychological, social, psychosocial, and time consequences.[22] Statements concerned the reasons for selecting the restaurant category. A five-point Likert scale accompanied each statement. Social consequences as a motivator, for example, were measured by asking "You chose a restaurant from this category because you wanted to make a positive impression on others." Corresponding questions were used for the other domains, i.e.: "wanted to have an evening's outing" (psychological); "didn't want to spend much time" (time); "didn't want to spend much money" (financial);

22. We discarded physical consequences as a motivation domain because they are more or less guaranteed by government regulations and authorities, and may not be an issue in selecting restaurants.

"wanted to have an excellent dinner" (performance); and "wanted to celebrate a special occasion" (psychosocial). As such, both motivation direction and motivation intensity were captured. Scales were (re)coded so that a high score indicates high motivation.

expertise

Expertise was measured by asking self-assessed knowledge judgments (Park and Lessig, 1981; Park, Mothersbaugh, and Feick, 1994), stressing the respondents' ability to judge restaurants in each of the five categories. Referring to their knowledge of restaurants (frequency of visit), the fast-food judgment, for example, was worded as "I am a competent judge of the quality performances of fast-food restaurants." A five-point scale was used ranging from (1) disagree .. to .. (5) agree. As expertise concerns an 'across-category ability,' the expertise measure was calculated by averaging the scores over these five categories.[23]

service quality dimensions and norms

Measures for service quality dimensions and service quality norms were obtained by asking respondents to reply to 26 items concerning the quality of restaurants (see Table 6.1). The selection of these items was based on previous research in the restaurant industry (Miller and Ginter, 1979; Bridges, 1993), and the 16 video-taped consumer interviews. Disconfirmation scores (Oliver, 1981; Swan and Trawick, 1981; Cadotte et al., 1987; Oliver and Swan, 1989; Yi and Nassen, 1993) were assessed to ascertain the underlying cognitive structure of service quality (cf. Parasuraman et al., 1988), and as these scores produce the most interpretable and valid results (Carman, 1990). Experience-based norm scores (Cadotte et al., 1987) were used to assess the quality norms on these service quality dimensions. That is, per item, the respondents assessed: (1) the experience-based norm; i.e., how restaurants in that category typically performed on that item, and (2) the disconfirmation score; i.e., to what extent this particular restaurant's performance deviated from the experience-based norm expectation. Bipolar 5-point 'common context-relevant' rating scales were used to measure these beliefs, as they guarantee both better and faster assessments (Stone and

23. Correlations between the quality assessment abilities averaged a low .15. Maximum was .47 (bistro - atmosphere), minimum was -.11 (atmosphere - fast-food).

Schkade, 1994). The experience-based norm question and the disconfirmation question for the friendliness item, for example, were worded as "The personnel in restaurants like this one are typically: (1) very unfriendly .. to .. (5) very friendly," and "During this particular encounter, the personnel were: (1) less friendly .. to .. (5) more friendly."

6.6 Analyses and results

6.6.1 Service selection check

In order to verify our own interpretation of restaurant categories, respondents were asked to classify the restaurant visited according to the five restaurant categories. Of the 480 respondents, 86% classified the restaurant correctly (78% in fast-food restaurants; 80% in lunchrooms; 78% in road-side restaurants; 94% in bistros; and 97% in atmosphere restaurants). As we wanted to base the analyses on the categorization perceptions of the respondents, there were 89 responses from fast-food restaurants, 84 from lunchrooms, 66 from road-side restaurants, 124 from bistros, and 106 from atmosphere restaurants available.

6.6.2 Construct validity and reliability

As high correlations were observed between the usage motivation scores and also between the service quality item scores, Principal Component Analysis (PCA) was applied to examine the higher-order factors of both constructs. The factors were determined according to the eigenvalues greater than one procedure (cf. Parasuraman et al., 1988; Carman, 1990) and Varimax rotation. Cronbach alphas were calculated to test the internal construct reliabilities.

Table 6.1 shows that time, financial, performance and psychological consequences are distinguished from social and psychosocial consequences indicating that usage situation can cause internal usage motivations and external usage motivations. Eigenvalues of these dimensions after rotation were computed as 2.09 and 1.29. The reliabilities of the constructs appear satisfactory (Nunnally, 1978).
It also appears that consumers distinguish seven service quality dimensions in restaurants. These dimensions are labelled as; empathy, ambiance, professionalism, reliability, service scapes, privacy, and access, showing eigenvalues of 2.98, 2.67, 2.64, 2.38, 1.86, 1.74, and 1.58 respectively.

Measures	Items	Factor Loadings	Corrected Item-Total Correlation	Alpha if Item Deleted
Usage Situation				
Variance Explained = 66.1%				
Internal Motivation	Time	.80	.64	.67
(Coefficient Alpha = .84)	Financial	.76	.41	.78
	Psychological	.70	.66	.65
	Performance	.63	.56	.72
External Motivation	Social	.90	.46	.
(Coefficient Alpha = .76)	Psychosocial	.70	.46	.
Service Quality Dimensions				
Variance Explained = 61.5%				
Empathy	Personal attention	.77	.72	.71
(Coefficient Alpha = .81)	Time spent on you	.75	.63	.74
	Friendliness of personnel	.69	.60	.75
	Concerned personnel	.64	.44	.81
	Free and easy personnel	.51	.54	.77
Ambiance	Attractive furnishings	.69	.52	.77
(Coefficient Alpha = .80)	Comfortable ambiance	.68	.62	.74
	Pleasant interior	.67	.58	.75
	Attractive food served	.53	.57	.76
	Taste of food served	.50	.58	.76
Professionalism	Explanation	.76	.59	.68
(Coefficient Alpha = .76)	Personal advice	.61	.65	.67
	Food choice	.59	.41	.75
	Competence of personnel	.53	.59	.68
	Nutrition of food served	.44	.37	.76
Reliability	Correct service	.84	.69	.70
(Coefficient Alpha = .83)	Correct food processing	.80	.72	.66
	Flexibility	.57	.56	.83
Service Scapes	Attractive environment	.69	.44	.43
(Coefficient Alpha = .56)	Attractiveness facade	.68	.37	.56
	Immaculately dressed	.55	.40	.49
Privacy	Quietness	.82	.49	.45
(Coefficient Alpha = .63)	Peaceful	.78	.47	.48
	Privacy	.60	.38	.61
Access	Easy access	.87	.56	.
(Coefficient Alpha = .74)	Fast access	.86	.56	.

Table 6.1 Dimensionality and Reliability of Usage Situation and Service Quality

Measure	Empathy Norm	Ambiance Norm	Professionalism Norm	Reliability Norm	Scapes Norm	Privacy Norm	Access Norm	Internal Motivation	External Motivation
Ambiance Norm	.70								
Professionalism Norm	.69	.72							
Reliability Norm	.55	.53	.61						
Scapes Norm	.44	.50	.45	.35					
Privacy Norm	.59	.69	.66	.49	.36				
Access Norm	-.13	-.17	*-.08*	*-.07*	*-.05*	-.16			
Internal Motivation	.56	.73	.62	.47	.36	.60	-.21		
External Motivation	.38	.45	.35	.28	.30	.39	-.25	.46	
Expertise	*.01*	*.01*	*.00*	*.03*	*.05*	*-.03*	*-.00*	*-.04*	*.01*

$p < .01$
p > .1

Table 6.2 Correlation Matrix of Variables

The fit of the model and the reliabilities of the constructs are adequate, except for service scapes whose reliability is below Nunnally's (1978) standard (see Table 6.1).[24,25]
Usage motivation and service quality norm measures were computed by averaging the subsequent item scores. Table 6.2 presents the correlation matrix of the pooled scores indicating that discriminant validity is apparent on all constructs as none of the correlations exceeds .82 (Blau and Schoenherr, 1971 in Kimberly and Evanisko, 1981).

6.6.3 Category results

One-way ANOVA explored the relationships between the constructs computed and the service category selected. Tukey's HSD was used to specify the differences between the distinct service categories.

The results indicate that both usage motivation and service quality norms are significantly different across the service categories identified, whereas expertise is not (see Table 6.3). The results also show that whereas norm scores on empathy and ambiance are significantly different across the five service categories, privacy is selectively attended to when distinguishing atmosphere restaurants from non-atmosphere restaurant (all other) categories. This finding supports the idea of local regions of dimensions (Goldstone, 1994). Table 6.3 also shows that whereas the norm distributions across categories are rather high (high F-values), the norm distributions across consumers are rather low (low standard deviations).

24. Repeating the same procedure for each of the five restaurant categories (cf. Parasuraman et al., 1988; Carman, 1990), it appeared that this dimensional structure is, to a large extent, consistent across these restaurant types. The results presented in Appendix 6A indicate that most items load on the same factors in the five replications and that the majority of the items expected to load together actually do so. Applying Confirmatory Factor Analysis (Jöreskog and Sörbom, 1986, 1988; Steenkamp and Van Trijp, 1991), reliabilities of the category factors averaged above .70 and appeared consistent with the reliabilities of the restaurant class factors except for 'access' in lunchrooms and 'privacy' in lunchrooms and road-side restaurants. These results should be treated as indicative as for the road-side restaurant analyses, for example, only 66 responses were available for 26 items.

25. We also verified whether differences in expertise have an impact on the cognitive dimensional structure. Using a median-split, respondents were assigned to either the low-expert or the high-expert group. Although application of PCA with eigenvalues greater than 1 and Varimax rotation resulted in 6 and 7 quality dimensions respectively, differences are small. For example, 6 dimensions explain 59.2% and 59.0% of the variance respectively, and 20 of the 26 items load on corresponding factors in both groups (cf. Carman, 1990).

Source of Variation	F-Value	Degrees of Freedom	F-Probability	Mean-Scores (Standard Deviation)					Homogeneity of Variance
				Fast-Food	Lunchroom	Road-Side	Bistro	Atmosphere	(Levene Test)
Usage Motivation									
Internal Motivation	121.06	4;452	.00	2.71_{a} (.71)	3.31^{a}_{c} (.72)	3.28^{a}_{b} (.84)	$4.06^{a,b,c}_{d}$ (.66)	$4.64^{a,b,c,d}$ (.43)	.00
External Motivation	42.61	4;452	.00	1.35_{a} (.64)	1.47_{b} (.70)	1.56_{c} (.77)	$2.02^{a,b,c}_{d}$ (1.10)	$2.82^{a,b,c,d}$ (1.01)	.00
Expertise	1.12	4;448	.35	3.52 (.92)	3.38 (.48)	3.39 (.56)	3.41 (.56)	3.33 (.58)	.50
Service Quality Norms									
Empathy	43.01	4;458	.00	3.15_{a} (.54)	3.45^{a}_{c} (.57)	3.39^{a}_{b} (.50)	$3.62^{a,b}_{d}$ (.36)	$4.01^{a,b,c,d}$ (.43)	.00
Ambiance	128.79	4;443	.00	2.77_{a} (.61)	3.40^{a}_{c} (.51)	3.32^{a}_{b} (.49)	$3.78^{a,b,c}_{d}$ (.41)	$4.29^{a,b,c,d}$ (.37)	.00
Professionalism	51.09	4;417	.00	2.92_{a} (.58)	3.24^{a}_{c} (.49)	3.23^{a}_{b} (.50)	3.37^{a}_{d} (.41)	$3.89^{a,b,c,d}$ (.36)	.00
Reliability	34.92	4;433	.00	3.61_{c} (.59)	3.57_{b} (.58)	3.52_{a} (.63)	3.76^{a}_{d} (.45)	$4.33^{a,b,c,d}$ (.48)	.01
Service Scapes	21.46	4;457	.00	3.64^{a}_{b} (.47)	3.68^{a}_{c} (.46)	3.37_{a} (.50)	3.74^{a}_{d} (.36)	$3.98^{a,b,c,d}$ (.40)	.07
Privacy	84.92	4;447	.00	2.18_{a} (.68)	2.69_{c} (.58)	2.64_{b} (.68)	2.82_{d} (.60)	$3.74^{a,b,c,d}$ (.53)	.07
Access	17.56	4;430	.00	$3.90^{a,b}$ (.58)	$3.77^{a,b}_{c}$ (.64)	$4.14^{a,b,c}$ (.73)	3.46_{b} (.60)	3.45_{a} (.64)	.05

[a] Tukey's HSD; superscript versus subscript indices indicate significant differences between category means at p=.05.

Table 6.3 Restaurant Categories by Usage Motivation, Expertise, and Service Quality Norms (ANOVA)

Norm distribution and relationships for each category are shown in Figure 6.1. Whereas the norm distribution on ambiance, for example, is high, the norms on access show less distribution across the service categories. It also shows that whereas the norm on empathy, for example, increases gradually from fast-food to atmosphere restaurants, the norm on access is highest for road-side restaurants.

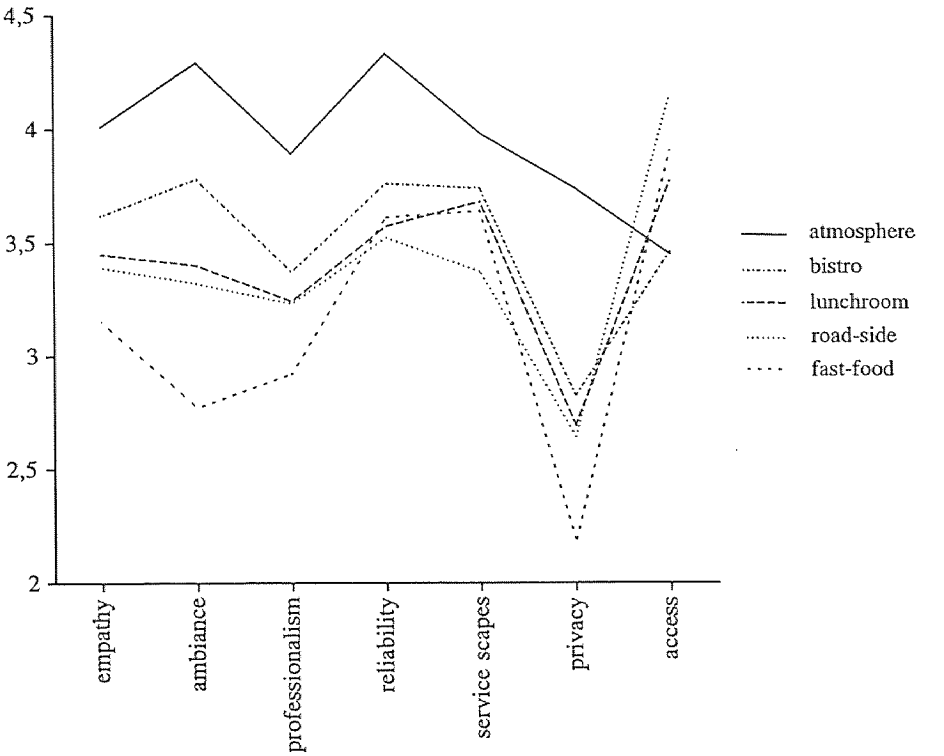

Figure 6.1 Restaurant Categories and Norm Structure

6.6.4 Quality norm results

To establish the effect of usage situation and expertise on service quality norms, stepwise multiple regression analysis was applied.[26]

26. Listwise analysis frequently showed insignificant main effects (especially for external usage motivation and expertise) but significant interaction effects (especially between external usage motivation and expertise), without considering multi-collinearity between main effects and interaction effects.

Dependent Variable	Independent Variable	R^2adj.	F-Value	Degrees of Freedom	F-Probability	Parameter Estimate	s.e.	t-Value	p-Value
Empathy		.34	112.47	2;437	.00				
	Internal Motivation					.29	.02	11.52	.00
	External Motivation x Expertise					.12	.03	3.78	.00
	Constant					2.33	.09	27.07	.00
Ambiance		.56	264.09	2;423	.00				
	Internal Motivation					.49	.03	18.82	.00
	External Motivation x Expertise					.13	.03	3.77	.00
	Constant					1.59	.09	17.81	.00
Professionalism		.38	249.70	1;401	.00				
	Internal Motivation					.36	.03	15.80	.00
	Constant					2.01	.09	23.24	.00
Reliability		.22	116.97	1;417	.00				
	Internal Motivation					.29	.03	10.82	.00
	Constant					2.70	.10	26.28	.00
Service Scapes		.15	37.83	2;436	.00				
	Internal Motivation					.13	.02	5.75	.00
	External Motivation x Expertise					.10	.03	3.43	.00
	Constant					3.07	.08	38.23	.00
Privacy		.39	136.17	2;428	.00				
	Internal Motivation					.43	.04	10.07	.00
	Internal x External Motivation					.11	.04	2.94	.00
	Constant					1.07	.13	8.18	.00
Access		.07	30.27	1;414	.00				
	Internal x External Motivation					-.17	.03	-5.50	.00
	Constant					3.92	.06	69.22	.00

Table 6.4 The Effects of Internal and External Usage Motivation and Expertise on Service Quality Norms (Stepwise Regression)

The results presented in Table 6.4 indicate that both usage motivation and expertise have an impact on the service quality norms consumers apply in purchase decisions. Especially the quality norms on ambiance, professionalism, privacy, and empathy are positively related with these determinant factors. Access, on the other hand, has a negative relationship with usage motivation. Especially internal usage motivation has an impact on service quality norm selection. The effect of external usage motivation on service quality norms seems conditional on either internal usage motivation or expertise. Expertise apparently has no main effect on the service quality norms applied by consumers.[27]

6.7 Discussion and limitations

On the basis of multiple experiences in a product class, consumers distinguish product categories because product brands perform differently on salient product dimensions. Category experiences are used as reference norms for brand estimates and for brand performances in decision making and evaluation. In this study we investigated which quality dimensions are used to distinguish service quality, how categories are defined by experience-based norms on these dimensions, and what determines the selection of these norms in purchase decision making.

It was observed that consumers evaluate restaurants on seven quality dimensions. This dimensional structure is robust, since it appeared in all five service categories, supporting the categorization premise of equivalence. In line with categorization theory, the experience-based norms on these quality dimensions, however, were found to be specific to the distinct service categories. That is, large differences have been observed on the quality norms held by consumers across these categories. On the other hand, within each category, consumers have established more or less the same quality norms. The results indicate that consumers have a clear and shared picture of what exactly can be expected from each service category (e.g., fast-food restaurants) and which category is expected to perform best on each of the service quality norms. It has also been observed that between norms certain interrelationships exist (see Figure 6.1).

27. Hierarchical linear modeling (Bryk and Raudenbush, 1992) was also applied to determine whether differences in expertise and motivation were also related to differences in norms *within* service categories. No significant results were observed.

These findings imply that when, for example, high performance norms are set on empathy and professionalism, almost automatically atmosphere restaurants are considered as the appropriate category since experience in the service class has shown that high performances on these dimensions go together with this particular category. To a large extent, a norm on one or a few specific dimensions determines the norms on the other dimensions and the suitability of each service category.

Studying the selection of these quality norms, we found that usage situations and expertise are important determinants. It appears that usage motivation and expertise are positively related to service quality norms, except for the quality dimension access. The impact of the two factors on these norms, however, appeared to be significantly different. Generally, it was discovered that internal usage motivation is the most important factor. The impact of expertise is found to be conditional on external usage motivation, and is only apparent when functional quality dimensions (Lehtinen and Lehtinen, 1982) are considered. Norms on empathy and ambiance, for example, are higher when both external usage motivation and expertise are higher. That is, expertise is only effective when the usage situation is socially directive and when socially interactive quality dimensions are involved.

The selection of the service industry may have influenced the differences in impact of internal and external usage motivation and expertise on service quality norms selection. That is, having dinner in restaurants will always be related to internal goals (e.g., spending your money and time), whereas external goals (e.g., impressing others) may not (e.g., when you are not accompanied by others). Perhaps, the service industry selection may also have caused the limited effect of expertise on quality norm selection, as most consumers appear to have at least some knowledge of different restaurant categories. Selecting restaurants has eliminated expertise extremities, especially the possibility of being a complete novice. On the other hand, selecting a service with more variation in expertise would have caused the problem of incomparable dimensional structures, as the literature shows they will be different for novices and experts (Conover, 1982; Sujan and Bettman, 1989).

6.8 Managerial implications

Knowing that usage situation and expertise are related to service quality norms and that these norms are clustered in service categories may also have important implications for the management of service quality expectations.

First, as service quality norms depend on the extent to which consumers are experts or motivated to achieve usage situation consequences, management may try to attract those consumers who fit the characteristics of the service best. By stressing socially attractive facilities, the atmosphere restaurant manager may appeal to externally motivated consumers.
Second, as quality norms are to some extent interrelated within service categories, brands have to be designed and communicated in a categorical manner. Restaurant managers, for example, may decide that their restaurant will focus on quick lunch occasions (stress high performance on access) and will not aim for business dinner parties as well (high performance on ambiance), as these service propositions (and perhaps also positionings) seem incompatible.
Third, as service categories are selected because they are expected to perform well on specific quality dimensions, cue management should focus on prototypical cues too (i.e., cues that tell the consumer that the service is a good example of a certain category: see Chapter 7). This is an important issue, as there is reason to believe that consumers, when categorizing brands, take the norm performances of the service category as the initial estimates for the brand's performance. When cues are not balanced and geared to one another in a categorical manner, consumers may establish wrong service quality estimates. That is, the consumer may assess estimates the service manager is not able or not willing to fulfill. Perhaps even the consumer may discard the brand as a result of perceived inconsistency and uncertainty.

	Assignment to Dimension (corresponding numbers per category indicate a corresponding factor)					
	Service Class	Service Categories				
Quality Items	Restaurants	Fast-Food	Lunchroom	Road-Side	Bistro	Atmosphere
Personal attention	1	1	1	1	1	1
Time spent on you	1	1	1	1	1	1
Friendliness personnel	1	1	1	1	1	1
Concerned personnel	1	5	1	1	1	5
Free and easy personnel	1	1	1	2	4	1
Attractive furnishing	2	2	5	2	2	1
Comfortable ambiance	2	2	2	5	2	2
Pleasant interior	2	4	5	7	2	1
Attractive food served	2	2	2	3	2	2
Taste of food served	2	4	3	2	2	2
Explanation	3	2	3	3	3	2
Personal advice	3	3	3	3	3	2
Food choice	3	4	3	4	3	4
Competence of personnel	3	6	3	3	3	2
Nutrition of food served	3	3	2	2	5	3
Correct service	4	4	4	2	3	2
Correct food processing	4	4	4	2	3	2
Flexibility	4	6	4	4	3	2
Attractive environment	5	1	5	5	5	4
Attractiveness facade	5	1	5	5	4	3
Immaculately dressed	5	1	5	4	5	1
Quietness	6	3	6	6	6	6
Peaceful	6	3	6	6	6	6
Privacy	6	6	6	6	6	6
Easy access	7	7	7	7	7	7
Fast access	7	7	7	7	7	7

Appendix 6A Construct and Nomological Validity of Service Quality Dimensions Across Categories

Chapter 7

The Effect of Quality and Prototypicality on Behavioral Intentions

7.1 Introduction

Consumers usually buy products for their benefits. Since it is hard to determine the extent to which products produce these desired benefits prior to consumption, consumers form expectations about these benefits using a variety of information sources. Although sources like personal or other customers' experiences, and consumer reports are preferred, they may be unavailable, incomplete, or contradictory. Consequently, the consumer may have to rely on product cues and infer the benefits themselves (Jacoby, Szybillo, and Busato-Schach, 1977; Mazursky and Jacoby, 1985). Knowledge on which cues are used to infer which expectations, may be used to manage brand preference and brand sales.

Dealing with the composition of product characteristics that are used in consumer assessments, cue management has been studied in two different research areas.

Traditionally, cue management has been studied within the perceived quality literature. Especially the impact of the predictive and the confidence value of a cue on perceived quality has been investigated. Within this literature it has been assumed that consumers prefer cues with high predictive and high confidence value, that these cues are used to infer the quality (dimensions) of a brand in a piecemeal, systematic, and extensive way, and that brands that perform best on high predictive and confidence quality cues are preferred by the consumer (Cox, 1967; Olson and Jacoby, 1972; Jun and Jolibert, 1983; Johnson and Russo, 1984; Feldman and Lynch, 1988; Lynch, Marmorstein, and Weigold, 1988; Maheswaran, Mackie, and Chaiken, 1992).

A more recent perspective on cue management is based on the categorization literature (Yi and Gray, 1996). This approach is based on the premise that before consumers use cues to infer the exact quality of a brand, cues are used to identify the brand as a member of a product category (Bruner, 1957; Ward et al., 1992).

On these categories, the consumer already holds specified quality expectations (norms) and specific fitness-for-use associations (see Chapter 6). These category expectations may be attributed to the new brand to the extent that it is prototypical of that category (Stayman, Alden, and Smith, 1992). Prototypical cues indicate category membership, and brands possessing these cues are expected to meet specific benefits that may be required by the consumer.

Whereas the quality perception approach has been dominant in the cue management literature, the categorization approach seems appealing as well, as it may be highly effective and efficient. As an alternative management approach it may be especially interesting as: (1) research has shown some evidence that consumers are aware of and prefer brands that are typical of the product category (Troye, 1984; Nedungadi and Hutchinson, 1985; Ward and Loken, 1988); (2) the theoretical impact of confidence value on cue selection and usage has found very little empirical support (Rudell, 1979; Steenkamp, 1989); and (3) an emerging amount of research has shown that consumers are unable and unmotivated to infer quality in a piecemeal way (see Alba and Hutchinson, 1987; Maheswaran et al., 1992; Broniarczyk and Alba, 1994).

The purpose of this chapter is to integrate the categorization perspective with the piecemeal perspective in the context of quality assessment and purchase decision making. Next, a review of the literature on piecemeal and category-based belief processing is presented. The significance of the categorization approach in brand and cue management has been explored by means of an experiment in the restaurant business.

Figure 7.1 visualizes the perceived quality and categorization perspectives on cue management. Whereas, traditionally, perceived and confidence values have been measured to explain cue usage and to establish the effect of cues on purchase intention, in this study we will also focus on the prototypicality value of cues.

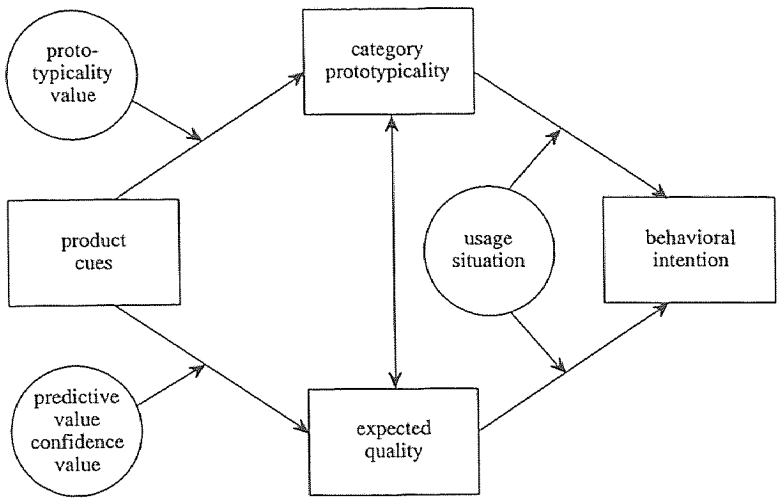

Figure 7.1 Integrating the Quality and Category Cue Management Perspective

7.2 Cue usage in belief processing

7.2.1 Introduction

Although the consumer behavior literature shows that consumers may use various approaches to infer beliefs and make estimates (Bruner, 1957; Cohen and Basu, 1987; Van Raaij, 1988; Dick, Chakravarti, and Biehal, 1990; Lee and Olshavsky, 1994), piecemeal and category-based inference processes have attracted academic attention (Huber and McCann, 1982; Sujan, 1985; Alba and Hutchinson, 1987; Ford and Smith, 1987; Ross and Creyer, 1992). In piecemeal inference processes, lower-order items such as cues are based on other lower-order items first and the relationship between these lower-order items is used to assess higher-order items. In this systematic process -which most multi-attribute models are based on- cues are used to assess brand perceptions (e.g., cues → brand quality → product category). In category-based inference processes, lower-order items are used to select higher-order items which are used to assess lower-order items. In this heuristic process, cues are used to indicate an overall product category, and the associated beliefs of that category are transferred (back) to the focal brand being a category member (e.g., cues → product category → brand quality).

7.2.2 Piecemeal belief processing

There is a long research tradition of studying stimuli in piecemeal inferential belief processing. The assumption that the decision maker combines (often by adding or averaging) the pieces of (inferred) attribute information to determine the value of the product under consideration, has typically been applied in the perceived quality literature (Jacoby et al., 1977; Jun and Jolibert, 1983; Johnson and Levin, 1985; Brucks and Zeithaml, 1991; Richardson et al., 1994).

In order to explain why certain cues are preferred and used by consumers, researchers have distinguished between the predictive value and the confidence value of a cue (Cox, 1967; Olson, 1972). Predictive value is the extent to which a cue is a valid indicator of product quality and is based on the consumer's perception of the degree of association between a cue and the perceived quality of a product (Olson, 1972; Steenkamp, 1989). Based on Kelley's (1973) treatment of attributional validity, research has shown that consumers perceive cues like brand name, price, or country of origin to be associated (i.e., covary) with the overall quality of brands or with some of its quality dimensions (Jacoby et al., 1977; Olshavsky, 1985; Rao and Monroe, 1989; Lytle and Mokwa, 1991; Lehtinen and Lehtinen, 1991; Brucks and Zeithaml, 1991; Chang and Wildt, 1996). Confidence value is the extent to which a consumer thinks or feels he is able to accurately perceive, judge and interpret a cue, and is confident in his ability to distinguish differences in a cue (e.g., Cox, 1967; Cunningham, 1967; Sullivan and Burger, 1987; Steenkamp, 1989).

While empirical research has yielded conclusive evidence of the importance of predictive value in quality assessments and brand selection (Jacoby et al., 1977; Jun and Jolibert, 1983; Johnson and Russo, 1984; Brucks, 1985; Olshavsky, 1985; Rao and Monroe, 1988; Maheswaran et al., 1992), the impact of confidence value is less certain. Several reasons have been given in the literature for the lack of empirical support, including an inadequate conceptualization and measurement of the construct (Rudell, 1979; Steenkamp, 1989), context effects, and the wide variety of sometimes conflicting consumer-based antecedents of feeling confident (e.g., Block and Harper, 1991; Trafimow and Sniezek, 1994). More specifically, the confidence value of a cue as currently defined and measured, seems to say more about the consumer (i.e., self-confidence) than about his confidence in the product or its estimates.

Although quality research has traditionally assumed piecemeal inference pro-

cessing, recent research has shown that consumers are not always able or willing to make complete and piecemeal inferences (Bettman and Park, 1980; Sujan, 1985; Sujan and Deklava, 1987; Cohen and Basu, 1987; Folkes, 1994). They may not be willing because the cognitive effort in piecemeal processing may be high, whereas task motivation and consumer involvement may be low (Alba and Hutchinson, 1987; Maheswaran et al., 1992; Broniarczyk and Alba, 1994). They may not be able because the consumer may lack expertise and practice with this inference rule or may experience time constraints (Shostack, 1977; Furse et al., 1984; Dick et al., 1990; Ozanne et al., 1992; Yi and Nassen, 1993). Consumers who are unwilling or unable to make piecemeal inferences, however, may find an acceptable alternative in category-based inference making (Sujan and Deklava, 1987; Cohen and Basu, 1987; Bettman and Sujan, 1987; Loken and Ward, 1990; Lichtenstein and Burton, 1989; Ozanne et al., 1992; Iacobucci, Ostrom, Braig, and Bezjian-Avery, 1996).

7.2.3 Category-based belief processing

The categorization approach posits that consumers store information in memory around a set of category expectations (Ozanne et al., 1992). These expectations may include hypotheses about the usual values on attributes, importance weights of attributes, and how much variability there is across brands within that category on those attributes (see Chapter 6).

Stayman, Alden, and Smith (1992) argue that consumers who are exposed to an initial product-schema label and attendant attribute information that is congruent with the label, will assimilate (Hovland, Harvey, and Sherif 1957; Pieters et al., 1995) the information within the cued schema and base product expectations on the initially cued schema. Therefore, to the extent that an offer resembles, represents, or is comparable to the product category prototype (Rosch and Mervis, 1975; Johnson, 1984), category-level beliefs will generalize to the new brand (Sujan, Bettman, and Sujan, 1986; Alba and Hutchinson, 1987; Sujan and Bettman, 1989; Schoormans and Robben, 1997). As (common) categories are already stored in memory, it seems to be more efficient (i.e., requires less effort) for the consumer to derive quality expectations and purchase intentions from associations around categories, than from applying a piecemeal approach. As in (goal-directed) categories the category-level beliefs are related to specific goal achievements, category-based belief processing may also be a more effective approach.

Some cues may be more useful for telling category membership from non-mem-

bership than other cues (Zukier, 1982; Pham, 1996) and arouse the abstract images embodying the quality dimensions most commonly associated with prototypical members of that category. Ward et al. (1992), for example, found that external environmental cues are prototypical for fast-food restaurants (Ward et al., 1992). Yi and Gray (1996) observed that paper type is more typical than article length for distinguishing newspapers from magazines. Prototypicality value of a cue may be used here to express the extent to which the consumer perceives that a cue is a valid indicator for (i.e., signals) category membership of a product.[28] In this context, two measures have been developed (Rosch et al., 1976; Yi and Gray, 1996). Attribute or cue validity is defined as the conditional probability that an object is a member of a category given that the particular attribute is present. Category validity is the conditional probability that an attribute is present given that an object is a member of a category.

7.3 Research hypotheses

Based on the theoretical elaboration, research hypotheses are formulated in this section explicating both the importance of category prototypicality and the relationship between quality cue values and prototypicality cue values. Stressing the importance of studying and managing prototypicality, three hypotheses are proposed concerning the relationships between quality, prototypicality, and choice on the product level. In addition, two hypotheses are proposed concerning these relationships on the cue level, offering opportunities to specify and manage prototypicality.

category prototypicality hypotheses

As a result of multiple experiences within a product class, the consumer may need to distinguish categories as brands perform differently on salient attributes. Whereas initial category structures may have to be revised as a result of new evidence (Sujan and Bettman, 1989; Hoch and Deighton, 1989; Stayman et al., 1992), eventually, categories may become more deterministic and the consumer

28. Smith, Osherson, Rips, and Keane (1988) have labelled this measure attribute diagnosticity. We prefer, however, the label prototypicality value as attributes (e.g. cues) may have more diagnostic functions than just telling instances from noninstances of a product category.

will know with at least some certainty how category members will perform on the salient attributes.[29] As a result, it may be argued that the quality estimates of a prototypical brand will be held with more confidence than those of a brand that does not resemble a category, and estimates may have to be inferred in piecemeal processes. This would imply that to the extent that a brand is dissimilar to a typical category member, less decisive quality expectations may be observed. Therefore the following hypothesis will be tested:

Hypothesis 1. Consumers are more confident about their quality estimates of prototypical brands than they are about non-prototypical brands.

In order to explain behavioral intention, research has typically focused on the effect of perceived quality and cost, and assumed that high expected quality and low expected cost are preferred by consumers (see Chapter 1). However, the quality and cost levels sought by the consumer may depend on the usage situation the consumer is confronted with (see Chapter 6). These usage situations can comprise several usage goals the consumer may want to achieve by purchasing the product. Therefore the following hypothesis will be tested:

Hypothesis 2. The effect of estimated quality and estimated cost on behavioral intention is mediated by the consumer usage situation.

Recently it has been observed that consumers exhibit some preference for prototypical products (Troye, 1984; Nedungadi and Hutchinson, 1985; Ward and Loken, 1986, 1988). As prototypical products are expected to offer an experience-based quality and cost level that may perfectly fit the specific usage situation and subsequent goals of the consumer, it might well be that prototypicality is an important construct in explaining behavioral intention. However, prototypicality preference will probably depend on the usage situation and the category that is expected to produce the desired consequences. Therefore the following hypothesis will be tested:

Hypothesis 3. The effect of prototypicality on behavioral intention is mediated by the consumer usage situation, and the category involved.

29. Kahn and Sarin (1988, p. 266) call this certainty aspect, "... a quality depending on the amount, type, reliability, and 'unanimity' of the information and giving rise to one's degree of 'confidence' in the estimation of relative likelihoods."

cue prototypicality hypotheses

As categories are based on the usual values, the importance weights, and how much variability there is across brands within that category on the quality and cost attributes (Sujan and Bettman, 1989; Ward et al., 1992), product cues that are able to predict category membership will also have a high association with the quality level of a product. These associations must be held with high levels of confidence as they are experience-based. In addition, as within categories quality expectations are interrelated (see Figure 6.1), it may be assumed that this quality association exists over all or most quality dimensions. Therefore the following hypothesis will be tested:

Hypothesis 4. Prototypical cues have a positive association with estimated quality, which exists on multiple dimensions, and is held with high confidence.

Since prototypical brands capture a set of experience-based quality and cost norms that seem to fit certain usage goals, prototypical cues may be more valuable to the consumer than quality or cost cues in purchase decision making. Selecting prototypical cues, therefore, seems to be more efficient (as relevant beliefs are already stored in memory) and effective (in facilitating a competitive choice given the consumption goals) than selecting either quality or cost cues. Therefore the following hypothesis will be tested:

Hypothesis 5. Prototypical cues have a more positive association with behavioral intention than quality cues and cost cues.

7.4 Method

7.4.1 Introduction

Whereas in the available research direct evaluations are usually applied to measure predictive and confidence values of cues, we decided to use indirect measures. This choice was made as consumers may find it difficult and unrealistic to assess such measures directly for each cue separately (Charlton, Mitchell, and Elcock, 1993). Brucks and Zeithaml (1991) also concluded that, compared to direct measures, indirect measures yield more valid results when the role of quality in forming overall judgments, preferences, and choices is assessed.

The hypotheses were tested in a conjoint measurement design. Below, the service and subject selection, the experimental design, and the procedure and consumer assessments are discussed.

7.4.2 Service and subject selection

Restaurants were selected as the service industry because they appear in the marketplace in various forms (categories and positioning), and because most consumers have at least some experience with them (across categories) and their quality cues (levels). Subjects were visitors of a shopping mall in a mid-size city in The Netherlands. After the screening of the subjects on their familiarity with the cue stimuli, 113 consumers participated in the study.

The experiment was conducted during morning and afternoon hours on weekdays and weekends. The average age of the subjects was 36 (σ=15 years), and 60% was female. Subjects had visited bistros and atmosphere restaurants at least twice over the past year.

7.4.3 Experimental design

A 2^4 (profiles) fractional factorial x 2 (categories) x 2 (situations) within-subjects design was used to examine the effects of four different cues in two different restaurant categories and two different usage situations. The restaurant categories were bistro restaurants and atmosphere restaurants as they showed significantly different experience-based norms on the quality dimensions (see Chapter 6).

As preferred quality and category may be determined by the usage situation the consumer is confronted with, two situations were chosen that reflect differences in consequences a consumer may want to achieve by buying a service. Based on the 16 interviews and the results described in Chapter 6, having a dinner party with close friends and having dinner with business associates were chosen. These usage situations reflect differences in time, financial, performance, psychological, social, and psychosocial consequences.

The managerial cues (see Muller and Woods, 1994) selected were brand name (Brucks and Zeithaml, 1991), dress (Rafaeli, 1993), interior (Ward and Eaton, 1994), and quality mark (Roest and Verhallen, 1995). Price as a quality cue was excluded as it would have a dual effect in this experiment. On the one hand, price may have a positive effect on perceived quality (e.g., Burnkrant, 1978; Johnson and Levin, 1985; Crane and DeYoung, 1990). On the other hand, price would have a negative effect on purchase intention as it also implies a monetary sacrifice for the quality offered. Hence, price as a cue would have caused unnecessary ambiguity in this experiment.

Two cue levels were used for each cue (Wittink, Krishnamurthi, and Nutter, 1982). The specific cue levels were chosen to correspond closely to actual features of the restaurant categories selected.

As we were especially interested in main effects, the number of profiles was reduced from 16 to 8 (Addelman, 1962). In Table 7.1, the cues and cue levels manipulated in the design are presented and the resulting 8 full-profiles are shown. For each profile a scenario was formulated in which the cue levels were phrased in random order (Hair, Anderson, Tatham, and Black, 1995). Profile 4, for example, was worded as: "When visiting downtown Tilburg you discover a new restaurant. You notice the 'Sinjoor' [brand name] signboard and the 'Meester kok plaque' [quality mark] on the facade. Gazing through the window, you see that the 'customers wear black-tie' [dress] and that the 'tables are set with linen' [interior]."

Profile	Brand Name	Dress	Interior	Quality Mark
1	Sinjoor	Casual	Placemats	ANWB ***
2	Sinjoor	Casual	Placemats	Meester Kok
3	Sinjoor	Black-tie	Table linen	ANWB ***
4	Sinjoor	Black-tie	Table linen	Meester Kok
5	Valentijn	Casual	Table linen	ANWB ***
6	Valentijn	Casual	Table linen	Meester kok
7	Valentijn	Black-tie	Placemats	ANWB ***
8	Valentijn	Black-tie	Placemats	Meester kok

Table 7.1 Fractional Factorial Design

7.4.4 Procedure and assessments

First, subjects were screened on their familiarity with the test service, the test cues, and the test cue levels in order to control for valid responses and to control for the effect of familiarity (Conover, 1982). In order to avoid response bias, they were asked whether or not they recognized a large number of brands, and features like quality marks and logos including the ones we wanted to manipulate in this conjoint experiment. Second, when subjects met the requirements, they were asked to participate in the study, that was conducted face-to-face. Subjects were told that ten dinner vouchers of one hundred Dutch guilders each would be raffled among the participants.

Subjects were trained to rate stimuli by means of numerical estimates on the scale applied in the study (cf. Vriens, 1995). The training task required subjects to assess quality, category prototypicality, and purchase intention estimates of a ninth profile, which was not a part of the experimental design itself.

After these selection and training exercises, a number of assessments were made using the manipulated restaurant profiles.

quality and cost estimates

Subjects were told that restaurants may perform differently on a number of quality dimensions. They were informed about the quality dimensions which were all represented by a more concrete item (see Chapter 6), namely: personal attention (empathy); homely interior (ambiance); competence of the chef (professionalism); faultless service (reliability); attractive site (service scapes); privacy (privacy); and easy access (access). For each of the eight restaurant profiles, subjects were asked to assess its quality dimension estimates and its overall quality estimate. The question about the professionalism estimate, for example, was worded as "The competence of the chef in this particular restaurant is likely to be ...," with response scales from (1) very low .. to .. (10) very high. The question about the overall quality estimate (one item) was worded as "The overall quality in this particular restaurant is likely to be ...," with response scales from (1) very low .. to .. (10) very high (cf. Boulding et al., 1993). In addition, confidence in their quality assessments was measured by asking "To what extent are you certain about your overall quality estimation for this restaurant," with response scales from (1) very uncertain .. to .. (10) very certain. The question about the overall cost estimate (one item) was worded as "The overall price of each dinner in this particular restaurant is likely to be ...," with response scales from (1) very low .. to .. (10) very high. In order to avoid order-effects, subjects evaluated the profiles in random order.

category prototypicality estimates

After a coffee break, the subjects were told that consumers may think in categories. A brief example was provided for color (red versus less red) and dog (German Shepherd versus Pekingese) categories (cf. Rosch and Mervis, 1975; Loken and Ward, 1990). Subjects were then told that in this study the focus was on bistro restaurants and atmosphere restaurants. Subjects were asked to assess the

typicality of the restaurant profiles on each of the two restaurant categories. Atmosphere restaurant typicality, for example, was measured by asking "To what extent is this particular restaurant: (1) an extremely poor example .. to .. (10) an extremely good example of an atmosphere restaurant?" (Loken and Ward, 1990).[30] Again the profiles were evaluated in random order.

behavioral intention estimates

Next, the subjects were told that different products may be bought for different reasons. As an example it was stated that roses seem an appropriate gift for a wedding but not for a funeral. Subjects were told that certain restaurants may be preferred when the subject wants to have "dinner with close friends," whereas other restaurants may be more appropriate when the subject wants to have "dinner with business associates." Behavioral intention was then measured by asking subjects: "How likely are you to visit this particular restaurant in this situation," with response scales from (1) very unlikely .. to .. (10) very likely. Restaurant profiles were evaluated in random order.

Finally, the subjects were asked to compose their prototypical idea of each of the two restaurant categories using the eight different cue levels. In addition, subject were asked about their age and (again) their familiarity with restaurant. Subjects were debriefed and thanked for their cooperation in this study. The subject's gender was indicated on the questionnaire by the interviewer.

30. Although prototypicality is usually measured using three measures, i.e., extremely poor example versus extremely good example; very atypical versus very typical; and very unrepresentative versus very representative, we used only one measure as the coefficient alpha of and the correlations between the three measures are generally high (Loken and Ward, 1990 $r = .64$ between exemplar goodness and typicality measures and $r = .78$ between the exemplar goodness and representativeness measures, and $\alpha = .82$ across all measures; Yi and Gray, 1996 found α's of .91 and .92). As the questionnaire is in Dutch, the (a)typicality measure was not suitable as it may have a negative connotation in that language.

7.5 Analyses and results

7.5.1 Manipulation and reliability checks

To verify our interpretation that the cue levels manipulated actually distinguished bistros from atmosphere restaurants, subjects were asked to compose their own typical bistro and typical atmosphere restaurant by selecting the appropriate level of the 4 cues used in the design. The results show that to a very large extent, the cue levels were classified as intended (brand: Sinjoor = bistro: 99%, Valentijn = atmosphere: 99%; dress: casual = bistro: 97%, black-tie = atmosphere: 99%; interior: placemats = bistro: 97%, table linen = atmosphere: 100%; quality mark: ANWB*** = bistro: 93%, Meester kok = atmosphere: 93%).[31]

7.5.2 Category prototypicality results

First, the proposed effect of prototypical products on consumer confidence about their product quality assessments (hypothesis 1) and the conditional effects of quality and costs, and prototypicality on behavioral intention (hypothesis 2 and 3) were verified. Multiple regression analysis was used to test these three hypotheses. As consumer assessments may depend on the category involved (prototypicality assessments) or the usage situation (behavioral intention assessment), dummy parameters were included. In particular, we allowed the estimation model measuring the impact of category prototypicality on quality assessment confidence to be product category dependent. The impact of estimated quality and cost on behavioral intention was estimated including usage situation effects. In the estimation of the relationship between category prototypicality and behavioral intention, both category and usage situation effects were considered. Allowing the effect of a possible interaction between category and situation, a -1 versus +1 coding was used. For these analyses, 3616 observations were available (113 respondents, 8 profiles, 2 categories, 2 usage situations).

As subjects evaluated restaurant profiles that differed on typical cue levels corresponding to either one or the other restaurant, the eight restaurant profiles ranged on the continuum from typical bistro restaurant to typical atmosphere restaurant (see also Appendix 7a). Therefore, it may be assumed that consumers are rela-

31. According to the current prototypicality conceptualization (based on category and cue validity) all four cues are almost maximally prototypical and equally important in assessing category membership (Yi and Gray, 1996).

tively certain about their quality assessments of both prototypical members and a-prototypical members of a category, as the latter will be typical for the other category. Therefore, the association between category prototypicality and the extent to which consumers are confident about their quality assessment is expected to be U-shaped. That is, the parameter estimate (i.e., prototypicality) may have a negative sign but its quadratic expression (i.e., prototypicality x prototypicality) should have a positive sign.

The regression equation presented in Table 7.2 is significant ($F_{5;1802}=18.26$; $p<.01$). Also, both prototypicality and its quadratic expression[32] have a significant effect ($p<.01$) on consumers' confidence in their quality estimates, and the signs of these parameter estimates are as predicted (negative versus positive). These results provide clear support for hypothesis 1. The results also indicate that the U-shaped relationship is generalizable: while category has a significant effect on the intercept ($p<.01$) and the slope ($p<.05$) of the estimated relationship, its effect on the U-shape is not significant ($p=.98$).

In order to support the hypothesis that the effect of estimated quality and cost on behavioral intention is conditional on the usage situation, significant parameter estimates should be observed for the interaction effects in the multiple regression model. Significant parameters are also needed for the hypothesis that the effect of prototypicality on behavioral intention is conditional on the usage situation and the category involved.

In Table 7.3 the results of the estimated model for perceived quality and cost is presented. The results show that the model ($F_{5;1802}=85.51$; $p=.00$) is significant and explains 19% of the variance in behavioral intention. The results in Table 7.3 are clear. Whereas estimated quality has a significant effect on behavioral intention, the direct effect of usage situation and its interaction effects with quality and cost are much stronger. The signs and the size of the parameters also indicate that higher estimated quality does not automatically imply higher preference. These results support hypothesis 2.

32. For interpretation purposes, quadratic prototypicality was recoded on a 10-point scale.

Effect	Parameter Estimate	s.e	Beta	t-Value	p-Value
Constant	7.66	.15		51.91	.00
Prototypicality (A)	-.20	.06	-.36	-3.44	.00
Prototypicality x Prototypicality (B)	.20	.05	.40	3.85	.00
Category (C)	-.66	.15	-.55	-4.50	.00
A x C	.11	.06	.59	1.98	.05
B x C	-.00	.05	-.01	-.03	.98
R^2adj. .05					
$F_{5;1802}$ (p) 18.26 (.00)					

Category was coded as follows: -1 = bistro, 1 = atmosphere restaurant.

Table 7.2 The Effect of Category Prototypicality on Quality Assessment Confidence

Table 7.4 presents the estimated model for the conditional effect of category prototypicality on behavioral intention. The model is significant ($F_{7;3608}=214.72$; $p=.00$) and explains 30% of the variance in behavioral intention. While category prototypicality has a rather low but significant ($p<.01$) effect on behavioral intention, the results indicate that there are strong and significant interaction effects of category and usage situation on the relationship between category prototypicality and behavioral intention. Specifically, whereas the relationship between prototypicality and intention is positive when the consumer is either looking for a bistro to visit with friends or an atmosphere restaurant to visit with business associates, the relationship is negative in the other combinations. In Figure 7.2 these relationships are visualized. These results support hypothesis 3.

Effect	Parameter Estimate	s.e	Beta	t-Value	p-Value
Constant	3.70	.44		8.39	.00
Estimated Quality (A)	.28	.08	.10	3.53	.00
Estimated Cost (B)	.03	.06	.01	.50	.62
Situation (C)	-7.99	.44	-3.66	-18.14	.00
A x C	.41	.08	1.41	5.24	.00
B x C	.64	.06	2.18	10.35	.00
R^2adj. .19					
$F_{5;1802}$ 85.51 (.00)					

Situation was coded as follows: -1 = friends, 1 = business.

Table 7.3 The Effects of Estimated Quality and Cost on Behavioral Intention

Effect	Parameter estimate	s.e	Beta	t-Value	p-Value
Constant	5.42	.09		61.68	.00
Prototypicality (A)	.10	.01	.10	7.03	.00
Category (B)	-.64	.09	-.29	-7.24	.00
Situation (C)	-.34	.09	-.15	-3.84	.00
A x B	.11	.01	.31	7.74	.00
A x C	.02	.01	.06	1.57	.12
B x C	-3.02	.09	-1.38	-34.34	.00
A x B x C	.51	.01	1.47	36.63	.00
R^2adj. .30					
$F_{7;3608}$ 214.72 (.00)					

Category and situation were coded as follows: -1 = bistro, 1 = atmosphere restaurant; -1 = friends, 1 = business.

Table 7.4 The Effect of Category Prototypicality on Behavioral Intention

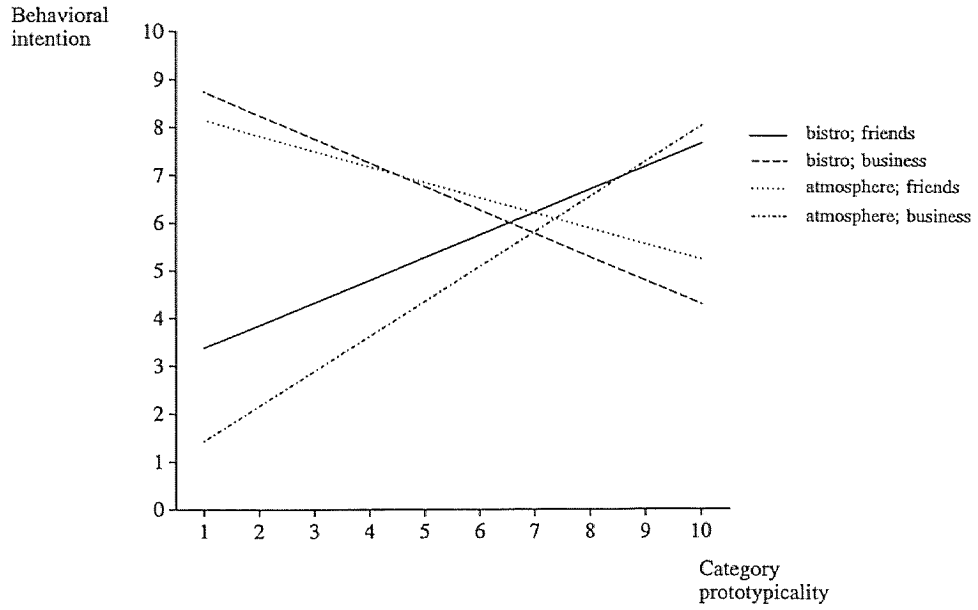

Figure 7.2 The Conditional Relationships Between Category Prototypicality and Behavioral Intention

7.5.3 Cue prototypicality results

Now that the impact of category prototypicality of a product on quality assessment and behavioral intention has been established, the cues on which these products are based will be considered, as they can be used to manage consumer assessments and purchase decision making.

To test the cue prototypicality hypotheses, six different cue values were established. The predictive quality cue value measures the extent to which a cue signals product quality. The discriminative value measures the extent to which the predictive quality value is concentrated on a single quality dimension. The confidence value measures the extent to which a cue signals confidence in the quality assessed. The predictive cost value measures the extent to which a cue signals product cost. The prototypicality value measures the extent to which a cue signals category membership. The preference value measures the extent to which a cue signals purchase intention.

Whereas most quality research has established cue values using compositional methods (e.g., by rating their confidence in their ability to perceive and evaluate

flavor in beer, Olson and Jacoby, 1972), a decompositional method based on full profile estimation was applied here, as this is a more realistic (multiple cues), more practical (actual brands), and more reliable approach (Nataraajan, 1993; DeSarbo, Huff, Rolandelli, and Choi, 1994). As conjoint analysis seems very useful to calculate which cues of a product are most important, what combinations of cues are most attractive, and what trade-offs subjects are willing to make (Ostrom and Iacobucci, 1995), this technique was used to assess the predictive quality, cost, confidence, prototypicality, and preference values of cues.

Predictive cue values

Performing conjoint analysis on the estimated product quality and cost, quality assessment confidence, category prototypicality, and behavioral intention scores, part-worth utilities for each subject were calculated for each cue level (Green and Srinivasan, 1978, 1990; Vriens, Wedel, and Wilms, 1996). The relative importance in assessing quality, cost, confidence, prototypicality or intention estimates of each cue for a given subject was computed as the difference between the highest and lowest associated part-worth. The predictive quality value of each cue, for example, is represented by the relative importance of that cue on the overall quality estimate, expressing the relative impact of that cue on assessing overall restaurant quality for that individual. As in this experiment two categories and two usage situation were used, two prototypicality values (bistro and atmosphere restaurants) and two preference values (with friends and with business associates) were calculated for each cue and for each individual.

Discriminative cue values

Using the predictive values calculated for the selected quality dimensions, the discriminative values were computed. The discriminative value of a cue expresses the extent to which the cue - quality association is concentrated on a single quality dimension (i.e., not equally distributed over the quality dimensions). Focusing on the relative uniqueness of the cue - quality dimension relationship (the maximum deviation of predictive quality dimension values for each cue), and discounting for the absolute cue - quality relationship (aggregated predictive quality values for that cue on all dimensions) already captured in the predictive quality values, we calculated the discriminative values using the following equation:

$$DV_{ci} = \frac{| \text{ maximum deviation of } PV_{cid} |}{\sum_{D=1}^{7} PV_{cid}}$$

In this equation, DV_{ci} is the discriminative value of cue c for subject i, and PV_{cid} is the predictive value of cue c for subject i on each of the quality dimensions d.

Table 7.5 shows the averaged cue values for brand name, dress, interior, and quality mark using the individual standardized utilities.[33,34] The ANOVA results are significant for all measures ($p < .01$) except for the quality dimension privacy ($p = .15$). Examining the post-hoc results (Tukey HSD) learns that the confidence values of quality marks and interior are significantly higher than the confidence value of dress ($p < .05$). It also appears that quality marks and interior have the highest, and brand name the lowest predictive value in assessing restaurant quality. Quality marks also have the highest discriminative value and interior displays the lowest discriminative value. Interior has the highest prototypicality value. The results also show slightly different prototypicality values between the two categories for each cue. Differences in preference value between the two usage situations are more apparent.

In order to test hypotheses 4 and 5, Pearson's correlation coefficients were calculated between predictive quality value, predictive cost value, confidence value, discriminative value, prototypicality value, and preference value of cues, as they measure the degree of association between these cue values. For the analysis, 1808 calculated observations were available (113 respondents, 4 cues, 2 categories, 2 usage situations).

33. The subfile summary reliability statistics (Pearson's r and Kendall's τ) were highly significant ($p < .01$) except for the quality dimension access ($p = .04$).

34. Based on the predictive cue values, conjoint simulators can be calculated using the part-worths computed for each subject on each cue. These simulators are best-calculated estimates of consumer assessments on all possible restaurant combinations (16 profiles) using the observed assessments (8 profiles). In Appendix 7A these simulators are presented.

Construct	F-Value	Degrees of Freedom	F-Probability	Mean-Scores				Homogeneity of Variance
				Brand Name	Dress	Interior	Quality Mark	(Levene Test)
Predictive Cost Value	4.90	3;440	.00	$.19_{a}$	$.22_{a}$	$.25_{a}$	$.34^{a}$	.00
Predictive Quality Value								
Quality	16.97	3;448	.00	$.18_{a,b}$	$.19_{a,b}$	$.28_{a}^{b}$	$.35^{a}$	.00
Empathy	10.11	3;432	.00	$.21_{a}$	$.21_{a}$	$.33^{a}$	$.25_{a}$	.02
Ambiance	42.83	3;436	.00	$.20_{a}$	$.18_{a}$	$.43^{a}$	$.20_{a}$	.00
Professionalism	191.44	3;440	.00	$.12_{a}$	$.11_{a}$	$.15_{a}$	$.62^{a}$	.00
Reliability	9.23	3;428	.00	$.19_{a,b}$	$.22_{a,b}$	$.29^{b}$	$.30^{a}$	.15
Service scapes	7.20	3;416	.00	$.22_{a}$	$.22_{a}$	$.33^{a}$	$.23_{a}$	.01
Privacy	1.80	3;400	.15	.26	.23	.28	.22	.47
Access	4.93	3;240	.00	$.32^{a}$	$.20_{a}$	$.22_{a}$	.26	.01
Discriminative Value	4.81	3;444	.00	.20	$.16_{a}$	$.17_{a}$	$.22^{a}$	.82
Confidence Value	4.84	3;440	.00	.24	$.20_{a,b}$	$.27^{b}$	$.28^{a}$	.00
Prototypicality Value								
Bistro	27.35	3;444	.00	$.20_{a}$	$.25_{a}$	$.36^{a}$	$.20_{a}$	.01
Atmosphere	48.41	3;448	.00	$.17_{a,b}$	$.23_{a}^{b}$	$.39^{a}$	$.22_{a}$	.03
Preference Value								
Friends	14.10	3;448	.00	$.17_{a,b}$	$.33^{a}$	$.26_{a}^{b}$	$.23_{a}$	.02
Business	47.11	3;448	.00	$.14_{a,b,c}$	$.28_{a}^{b}$	$.38^{a}$	$.20_{a,b}^{c}$	.00

[a] Tukey's HSD; superscript versus subscript indices indicate significant differences between cue value means at $p=.05$.

Table 7.5 Estimated Cue Values (ANOVA)

To support the hypothesized associations expressed in hypothesis 4, predictive quality value and confidence value should have a positive correlation, whereas discriminative value should have a negative correlation with prototypicality cue value.

Inspection of the results presented in Table 7.6 shows that the correlations are significant and that the signs are in the desired direction. That is, the Pearson's correlations between prototypicality value and predictive quality value ($r=.30$), prototypicality value and confidence value ($r=.12$), and prototypicality value and discriminative value ($r=-.15$) are significant ($p<.01$). These findings all support hypothesis 4.

Although cue management has traditionally focused on the cue - perceived quality - behavioral intention relationship, it has been argued that studying the cue - category - behavioral intention relationship may be even more important. As it was hypothesized that cues capable of indicating category membership indicate purchase intention in a better way than quality or cost cues can, the correlation coefficients between prototypicality value and preference value should be significantly higher than the correlation coefficient between either predictive quality value or predictive cost value and preference value.

Table 7.6 shows that the correlations between preference value and respectively predictive quality value (.24), predictive cost value (.31), and prototypicality value (.37) are all significant ($p<.01$). Moreover, the prototypicality value - preference value correlation appears to be significantly higher than the predictive quality value - preference value correlation ($t=4.84$; $p<.01$) and the predictive cost value - preference value correlation ($t=1.96$; $p=.05$). These results support hypothesis 5.

Cue values	Confidence	Discrimi-native	Quality	Cost	Proto-typicality
Discriminative	-.05 (.03)				
Quality	.24 (.00)	-.07 (.00)			
Cost	.27 (.00)	-.15 (.00)	.49 (.00)		
Prototypicality	.12 (.00)	-.15 (.00)	.30 (.00)	.27 (.00)	
Preference	.11 (.00)	-.18 (.00)	.24 (.00)	.31 (.00)	.37 (.00)

Table 7.6 Correlations Among Cue Values (p-Values)

7.6 Discussion and limitations

Whereas consumer preference for prototypical products may be generally significant (Troye, 1984), the results of this study suggest that both categories and usage situation involved may have a strong impact on such preference. More specifically, prototypical products are preferred by consumers to the extent that the category fits the usage situation and subsequent consequences or goals. When a consumer wants to have dinner with business associates, only typical atmosphere restaurants are preferred as they are expected to perform at the quality levels that fit the consumer goals in that usage situation. Likewise, when a consumer wants to have dinner with close friends, only typical bistros are preferred, despite the observation that in this study the non-typical bistros were estimated to perform higher on quality than a typical bistro. In fact, although quality research has assumed that the quality expectation - purchase intention relationship is a vector model, this relationship may be captured best in an ideal-point model.[35]

35. Teas (1993, 1994) has argued that the 22-item scale proposed by Parasuraman et al. (1988) may have to be specified more clearly as some items are vectors whereas others are ideal-points. The notion that expected quality level (desired or experienced) should be considered as conditional clarifies and expands on this idea.

While the preference for prototypical products might be explained by the notion that they seem to offer the performance level that fits specific usage goals best, we found that consumers have more confidence in the quality estimates of prototypical products. Consequently, the feeling of uncertainty which consumers usually try to avoid (Murray, 1991; Jacoby, Jaccard, Currim, Kuss, Ansari, and Troutman, 1994), may be reduced by buying prototypical products. As such, selecting a prototypical category member appears to be an effective and efficient purchase decision approach.

For this reason, applying the categorization approach to cue research and cue management might be encouraging. Whereas traditionally researchers and managers have focused on the perceived association between product cues and product quality (predictive value), we expanded this perspective by also investigating the perceived association between product cues and category membership (prototypicality value), and the association between product cues and behavioral intention (preference value). In contrast to the direct cue value assessment approach (i.e., separate cues) typically applied in cue research, an indirect approach was used in which these values were derived from product (i.e., a package of cues) assessments.

The results of this research indicate that cues differ significantly in their perceived association with product quality, category membership, and behavioral intention.[36] In particular, quality marks and interior were highly informative about the product quality of restaurants. Quality marks also appear to signal product cost better than other cues. Whereas quality marks are especially informative on a single quality dimension (i.e., professionalism), interior is informative on multiple quality dimensions. Although all cue levels appeared to be characteristic of either bistros or atmosphere restaurants (see manipulation check), the results indicate that interior is by far the most suitable in distinguishing category membership. For example, when the consumer observes placemats, they are likely to categorize the restaurant as a bistro, rather than as an atmosphere restaurant. Table linen, on the other hand, appears indicative of atmosphere restaurants. Whereas information on interior is especially valued in business dinner situations, information on

36. It should be noted that according to traditional prototypicality research (i.e., measuring the relative number of respondents that assign a cue exclusively to a single category) all cues would have been almost equally important (see Note 31). Using the indirect approach, significantly different prototypicality values have been observed.

the (in)formality of dress is valued more in dinner occasions with close friends. In general, it was found that preference value is more closely related to prototypicality value than to perceived quality value, indicating that cues that are used in purchase decision making are more likely to be cues that are used to assess category membership, than cues that are used to assess product quality. Similar conclusions can be drawn for product cost. It was also discovered that prototypicality value is positively related to predictive quality value and confidence value, and negatively related to discriminative value. These findings indicate that prototypical cues cover quality information on almost all quality dimensions and that this quality information is held with high levels of confidence.

A few limitations of this study should also be stressed. First, as only two categories were selected in this study, some cues may have elicited more (or less) cue value than would have occurred if more categories had been involved. For example, in this study, subjects almost exclusively associated placemats with bistros whereas placemats are also frequently used in other restaurant categories. As such, placemats seem suitable to distinguish bistros from atmosphere restaurants but certainly not to distinguish bistros from fast-food restaurants. Perhaps certain interaction effects between cues also exist, whereas we only focused on main effects in our design. In addition, the observation that estimated quality has a negative impact on behavioral intention should be interpreted carefully as this negative relationship may only exist when bistros are compared with atmosphere restaurants (see Chapter 6). On the other hand, the interpretation that higher quality estimates are not always preferred seems generalizable. Second, the minor impact of brand name on quality, prototypicality and behavioral intention may have been caused by the selection of two local instead of national brands, as is usually done in perceived quality research. Selecting national brands might have resulted in stronger relationships, as consumers may use them as labels for product categories. On the other hand, subjects were local residents and familiar with both brands. In addition, and perhaps more importantly, we were less interested in the individual cue value levels but more in the generalizability of the cue value relationships. Third, whereas the application of conjoint analysis in determining indirect measures of predictive values seems appropriate, the application of a conjoint design implies that consumers have to evaluate many profiles. Fatigue and exhaustion may cause response bias and unreliable measures.

7.7 Managerial implications

The results of this study have important implications for quality and cue management. Whereas cue management has typically studied the impact of cues on perceived quality, studying the prototypicality of cues is useful too. Important reasons are that consumers may select these cues first as they provide them with initial quality estimates (cf. Bruner, 1957) and that they are not always willing or able to estimate quality in a systematic and piecemeal way (cf. Bettman and Park, 1980). In this study we found evidence that prototypicality is also more related to behavioral intention than quality is.

As a consequence, prototypical cues should be stressed in product design and marketing communications. They should also be stressed in a coherent way (i.e., all cues should be related to a single category), as a mismatch may lower the suitability of the brand, lower consumer confidence in the brand, and may even cause rejection of the brand due to contrast effects (Anderson 1973, Anderson and Hair 1972). Cues that are not prototypical may be used in a more flexible manner, as they do not automatically trigger the entire set of experience-based norms. From this perspective, knowledge on the discriminative values of cues is relevant. Given a certain predictive quality value, discriminant cues allow the brand manager to highlight (i.e., position on) a specific quality dimension in which the brand is superior within its product category. Such cues allow an upgrading of the quality estimates of a product without also changing the category classification. Schema switching would result in different quality norms associated with the new category that the product is expected to meet (Mandler, 1982; Stayman et al., 1992).

Restaurant Profiles				Conjoint Simulators (Mean Scores)				
Brand Name	Dress	Interior	Quality Mark	Quality	Bistro	Atmos.	Friends	Business
Sinjoor	casual	placemat	ANWB	6.72	8.26	3.22	7.97	3.24
Valentijn	casual	placemat	ANWB	6.91	7.78	3.82	7.69	3.37
Sinjoor	blacktie	placemat	ANWB	6.99	6.91	4.52	6.55	4.85
Valentijn	blacktie	placemat	ANWB	7.18	6.44	5.12	6.27	4.98
Sinjoor	casual	tablelinen	ANWB	7.20	6.34	5.52	6.95	5.49
Sinjoor	casual	placemat	Meester	7.35	7.39	4.48	7.17	4.32
Valentijn	casual	tablelinen	ANWB	7.39	5.86	6.12	6.67	5.63
Sinjoor	blacktie	tablelinen	ANWB	7.47	5.00	6.82	5.54	7.11
Valentijn	casual	placemat	Meester	7.55	6.91	5.08	6.89	4.45
Sinjoor	blacktie	placemat	Meester	7.63	6.05	5.78	5.76	5.94
Valentijn	blacktie	tablelinen	ANWB	7.66	4.52	7.42	5.25	7.24
Valentijn	blacktie	placemat	Meester	7.82	5.57	6.38	5.47	6.07
Sinjoor	casual	tablelinen	Meester	7.83	5.47	6.78	6.15	6.58
Valentijn	casual	tablelinen	Meester	8.03	4.99	7.38	5.87	6.71
Sinjoor	blacktie	tablelinen	Meester	8.11	4.13	8.08	4.74	8.19
Valentijn	blacktie	tablelinen	Meester	8.30	3.65	8.69	4.46	8.33

Appendix 7A Simulated Scores on Estimated Quality, Category Prototypicality and Behavioral Intention

	Prototype	Brand name		Dress		Interior		Quality Mark	
Basis	mean	mean	p	mean	p	mean	p	mean	p
Upgrading (bistro)	6.72	6.91	.00	6.99	.00	7.20	.00	7.35	.00
Downgrading (atmosphere)	8.30	8.11	.00	8.03	.00	7.82	.00	7.66	.00

Appendix 7B1 Cue Incongruity Effects on Perceived Quality

	Prototype	Brand name		Dress		Interior		Quality Mark	
Basis	mean	mean	p	mean	p	mean	p	mean	p
Upgrading (bistro)	7.97	7.69	.00	6.55	.00	6.95	.00	7.17	.00
Downgrading (atmosphere)	8.33	8.19	.20	6.71	.00	6.07	.00	7.24	.00

Appendix 7B2 Cue Incongruity Effects on Behavioral Intention

Chapter 8

Conclusions, Implications and Future Research

8.1 Introduction

The objectives of thesis were to explore both the assessment of service quality expectations and opportunities to manage service quality assessments in purchase decision making.

Before exploring these assessment and management issues, we needed a better conceptualization of the service quality and the service quality expectation constructs, as a lack of consensus was observed in the literature on their exact meaning. Insufficient conceptualization might lead to ambiguity in assessment, measurement, and management of the construct and may undermine the value of current research and knowledge.
Based on this conceptualization, four empirical studies were conducted which investigated how consumers assess and use quality estimates and quality norms in purchase decision making. Especially the use and effect of cues in piecemeal and in category-based estimation processes was explored. Although consumers may use other information sources as well, cues appear to have a strong impact on these processes and to be highly managerial. The mediating effects of usage situation and consumer expertise on the product estimate - purchase intention relationship have also been considered. Implications for service quality management in general and for cue management in particular were discussed.

8.2 Conceptual studies

8.2.1 Introduction

Despite its prominence in the marketing literature over the last decade, perceived service quality is still defined as the overall discrepancy between perceptions of performances and expectations, without a specification of these components. As a result, both researchers and consumers may have used different interpretations of the same construct.

Using a conceptual framework, a first attempt was made to better understand the service quality construct and explicate its relationships with other purchase related constructs. This conceptual framework also allowed an elaboration on consumer expectations. Subsequently, we verified whether the expectation standard typically used in service quality research has been appropriate, at least from a theoretical perspective.

8.2.2 Conclusions and implications

In their effort to establish higher revenues, market share, productivity, and capacity utilization, many organizations have focused their marketing activities on positive word-of-mouth, (re)purchase intention, customer satisfaction, and loyalty. While these constructs are closely related to actual consumer behavior, they are also difficult to manage. To resolve this problem, perceived quality has been introduced as a construct to bridge this gap.

Specifying on what conceptual grounds or dimensions these constructs are different and related may clarify the uniqueness of each construct, but may also clarify how customer satisfaction, for example, can be enhanced by managing service quality. Applying six purchase-related dimensions derived from the consumer behavior literature, available research on perceived service quality, perceived product value, customer satisfaction/dissatisfaction, and product attitude was reviewed in order to find conceptual agreement on these constructs. The conceptual dimensions were: time (prepurchase or postpurchase), basis (give or get), object (product or consumer), content (cognitive, affective or conative), context (relative or absolute), and aggregation (transaction or relationship). Although the conceptual analysis showed that on some dimensions (e.g., basis) more consensus existed than on other dimensions (e.g., aggregation), a specific delineation of perceived service quality could be proposed. In this perspective, perceived service quality can be regarded as a relativistic, cognitive, product-related, postpurchase evaluation of 'get'-components, which is applicable on both a transaction and a relationship level. When we also specify these dimensions for customer satisfaction, it appears that similarities exist on the time and context dimensions, but dissimilarities exist on the basis, object, content, and aggregation dimensions. Consequently, supplying superior quality may stimulate customer satisfaction. However, when the monetary or behavioral costs are also higher, or when the consumer attributes his positive affective state (e.g., pleasure) to the self or his negative affective state (e.g., anger) to the product, quality may not have the apparent effect on customer satisfaction, because other aspects than the cognitive

product benefits are involved (Mano and Oliver, 1993).

This conceptualization of perceived service quality also makes the specification of the expectation component in the definition of the construct possible. This specification was needed because consumers may assess and hold multiple expectations in purchase decision making and evaluations. Applying the conceptual framework to these consumer expectations, it was suggested that experience-based norms may fit the characteristics of perceived quality better than the subjective norms which are typically used in service quality research and management. While it seems evident that subjective norms are more inherent in personal needs and purchase decision making and evaluation, experience-based norms seem to be more accessible and offer more managerial opportunities. That is, they focus on market-based product performances (or costs) rather than on consumer-based affective cost-benefit tradeoffs that seem to better fit the conceptual uniqueness of customer satisfaction. In prepurchase quality evaluations, also product estimates appeared to be valuable. These estimates are the consumer's cognitive predictions of the product's performance, and are typically based on product cues. As such, they seem to fit the conceptual characteristics of service quality even better than the characteristics of customer satisfaction, which has typically been using product estimates as the expectation standard.

Based on this theoretical elaboration, a more specific definition of perceived service quality has been proposed as: a relativistic, cognitive, product-related, postpurchase discrepancy between service performances and experience-based norms on 'get'-components.

8.2.3 Future research

Given the impact of service quality in theory and in practice, and its conceptual interrelationships with other purchase related constructs, more emphasis should be placed on studying the distinctive characteristics of perceived service quality. A clear focus on these conceptual domains may enable marketing academics and practitioners to explore the opportunities of perceived service quality and related constructs more thoroughly. In this respects, it seems important to consider the cognitive 'get'-components only (benefit related).[37] This does not mean that

37. The need to delineate the boundaries of service quality is also high as some researchers have recently argued that affect (e.g. Oliver, 1993) and costs (e.g. Holmlund, 1997) should be incorporated into perceived service quality.

'give'- or affective components are irrelevant. On the contrary. However, they are already captured by other constructs such as customer satisfaction and product attitude. Studying how service quality feeds into these constructs may make the management of customer satisfaction and loyalty possible (see Leunissen, Prevo, and Roest, 1996).

More perceived service quality research is needed from the transactional perspective, as research and measurement on using a relationship perspective has attracted the bulk of marketers' attention. While research concerning relationship-based perceived service quality (e.g., SERVQUAL and SERVPERF) is useful for strategic decisions, transactional research may be useful as a diagnostic tool to determine the basis of the (good or bad) relationship service quality and to get feedback information on the market performance of service operations (Strandvik, 1994; Vriens, Roest, De Kort, and Verhallen, 1998). In addition, future research might investigate the meanings that service transactions have for consumers (Bitner and Hubbert, 1994). Perhaps, customers already assess satisfaction or quality judgments during the service delivery process (Danaher and Mattsson, 1994). Hence, concurrent measurements of service experiences and how they feed into perceived service quality and customer satisfaction are important. Modeling such experiences and their linkages to perceived service quality and customer satisfaction is a challenge.

Future research may also clarify the direct and indirect effect of different types of expectations on perceived service quality. Existing studies differ greatly with respect to the products and subjects studied, the measures used, and the measurement applied. Whereas from a theoretical perspective, estimates and experience-based norms seem to fit the characteristics of perceived service quality better than subjective norms do, empirical research is still needed to verify this claim. Perhaps Cadotte et al's. (1987) study on the effect of different expectations on customer satisfaction/dissatisfaction should be repeated in a perceived service quality context. This study should preferably be a longitudinal one, in which the influence of transactional experiences on different norms and estimates can be investigated. This seems necessary, because few studies (e.g., Boulding et al., 1993; Pieters et al., 1995) have addressed this topic without providing conclusive suggestions on how to respond to and how to manage the different types of expectations consumers assess.

8.3 Empirical studies

8.3.1 Introduction

Traditionally, research on perceived service quality nas rocused on the perceived performance component and has neglected the expectation component. When quality expectations are considered in research, they are usually considered as a postpurchase reference for these perceived performances. Very little research is available on the assessment and effect of service quality expectations in prepurchase judgments. To add to our knowledge in this area, four empirical studies have been conducted examining the assessment and management of product estimates and experience-based norms, and their effect on purchase decision making.

8.3.2 Conclusions and implications

8.3.2.1 product cues and quality estimates

As purchase decisions are often based on estimated product benefits, academics have studied opportunities to manage subsequent assessment processes, especially for tangibles. Although much can be learned from the vast amount of research available on quality estimation of tangible products, certain conditions may not hold in the service context. Because services are intangible, heterogeneous, and transitory: (1) intrinsic cues are often scarcely available; (2) quality assessments are difficult to make and are generally held with low confidence; and (3) service consumers often may not be able or willing to infer service quality in a systematic (i.e., piecemeal) way. Consequently, cues that facilitate consumer assessment processes, or increase their confidence in such assessments, are likely to be preferred in quality estimation.

Quality marks, i.e., cues that provide the consumer with expert-based, objective, comprehensive and evaluative quality information, seem to pertain to both quality assessment processes and confidence. Exploring their potential in quality assessment and management, we found that consumers especially use quality marks in services where they lack the opportunity to personally verify the experience and credence quality of the service. Oddly enough, however, it was also found that quality marks do not completely cover these dimensions. Most quality marks certify only a few quality dimensions, and especially those that are rather easy to verify by the consumers themselves. Consequently, consumers who use quality

marks in purchase decision processes have serious misperceptions of which quality dimensions are actually captured by these quality marks and which are not. Service managers, therefore, should apply quality marks very carefully, as serious gaps between quality expectations and quality performances may be generated as a result of their use.

Service industrialization, which involves standardizing production processes or replacing employees by machines, may offer a set of cues that can be expected to decrease performance heterogeneity or quality variability. As quality variability is an important aspect of quality estimation and an important antecedent of purchase intention, lowering the variability may be an effective way to manage both. When trying to establish those effects, however, we found that industrialization affects not only the estimated service quality variability but also the estimated service quality level. It was found that industrialization of extrinsic (non-core) service components (e.g., company uniform) decreases the estimated quality variability and also increases the estimated quality level. Industrializing intrinsic (core) service components (e.g., counter), on the other hand, hardly affects the estimated quality variability but lowers the estimated quality level. An explanation is that these core components may have been used as prototypical cues for a specific low-performance service category (e.g., fast-food restaurants). Management, therefore, should have knowledge about which cues signal specific product quality or cost aspects, and which cues signal more comprehensive aspects such as category membership.

Prototypical cues, i.e., cues that signal category membership, may be interesting because they result in both more efficient and more effective assessments. First, they result in efficient assessments because they arouse quality and cost expectations on all salient product dimensions. These experience-based expectations are readily available in memory as category information. In addition, we observed that these quality expectations are held with high levels of confidence. Prototypical cues, therefore, offer the consumer confident service quality and cost estimates on all salient dimensions of the service without the need to infer these estimates in a piecemeal way, which requires much more cognitive effort. Second, they result in effective assessments, because it was found that specific categories and specific consumer goals are associated with each other. Consequently, it has been observed that consumers trying to achieve those goals appear to prefer brands that are typical of that category, offering the attributes they perceive as the best fit to match the benefits sought. As current research has yielded disappointing results

with respect to the ability to explain cue importance in consumer assessment processes (see Steenkamp, 1989, p. 249), indirect measures were used to quantify the cue - quality (predictive and confidence values) and the cue - category membership (prototypicality value) associations. Using conjoint analysis, the cue values of brand name, dress, interior, and quality marks were established. The results of this analysis showed that quality marks provide the consumer with the best information on service quality. They also have a very strong relationship with a single quality dimension (professionalism). On the other hand, interior is more powerful in determining category membership. In general, it was observed that prototypical cues are more valued in purchase decision making than quality cues. Given that prototypical cues offer the consumer effective and efficient assessments, these cues need specific attention from service management. Prototypical cues should be stressed in a coherent way in service design and service communication processes, as they arouse experience-based category expectations on all quality dimensions. Non-prototypical quality cues may be stressed to manage brand estimates on specific quality dimensions. Whereas prototypical cues inform the consumer that the brand is a good choice (i.e., cost-benefit and goal-related), non-prototypical quality cues may inform the consumer that it is the best choice in that category.

8.3.2.2 quality norms and purchase mediators

Since in purchase decision making, product estimates are usually compared with the product benefits required, academics have studied different types of norms that consumers may use as a frame of reference. Studying how these norms are established and employed by consumers may be interesting for service management in their effort to enhance brand preference.

Whereas subjective norms may be more related to purchase decision making, experience-based norms seem to be the appropriate expectation standard in service quality research. These experience-based norms are established by the consumer as a result of multiple experiences with brands in a product category. Categories differ on both the usual values and their variability across brands on the shared and salient product dimensions. In the restaurant business, seven quality dimensions emerged, including empathy, ambiance, professionalism, reliability, service scapes, privacy, and access. This dimensional structure appeared to be consistent across the restaurant categories. The experience-based norms on these dimensions were, as expected, significantly different between the five selected categories. Low differences were observed within the categories indicating that consumers

have a shared and specific idea of what to expect from those categories. It also appeared that these norms are interrelated, because a norm held on one dimension almost determines the norms held on the other quality dimensions. Service managers, therefore, may have to decide on the category first, as it determines the basic performance levels the brand is expected to achieve on all salient quality dimensions.

Exploring which set of experience-based norms are likely to be employed by the consumer to evaluate the quality estimates of products, we found that both the usage situation and the consumer's expertise are important determinants. Especially usage situation emerged as a mediating factor of the quality estimate - purchase intention relationship. Apparently, usage situations motivate consumers to select specific services and brands that meet the requirements (i.e., norms) of that current situation. In particular, when consumers are confronted with a usage situation in which time, financial, psychological, or performance consequences determine product evaluation and brand selection, norms on most quality dimensions (except access) will be higher. Brands that are expected to perform high on these dimensions are preferred in those situations. Expertise has a similar effect on quality norms, but only when social or psychosocial consequences and socially interactive norms are involved (e.g., empathy). As a result, restaurant managers may need to stress cues that signal high performance on these issues in business dinner occasions, for example, as corresponding norms are apparent.

8.3.3 Future research

Very few studies have addressed the assessment of service quality expectations. Given the importance of service expectations in purchase decision making and given the potential of managing quality assessments and brand preferences, however, more research seems to be needed to clarify unresolved issues and to test the generalizability of our findings.

Although in our studies only a limited number of cues have been used to explore their use in quality estimation and purchase decision making, consumers actually may use more and different information sources. Especially as our and other research (Murray, 1991; Webster, 1991) has shown that service consumers generally prefer personal sources (their own experiences or word-of-mouth), more clarity is needed on when and how product cues are used by consumers and should be used by service managers when personal sources are either absent or available. There is reason to believe, for example, that when both sources are

available and consumers are highly involved, product cues may be used to assess initial product estimates, and personal sources may be used to assess the reliability of these estimates. Another issue is that while we have focused on main effects only, it might also be relevant to consider interaction effects between different cues and between cues and other sources. Laric and Sarel (1981), for example, found that advertising claims are believed to be more reliable when the brand also carries a quality mark.

Whereas current cue research has focused on quality estimation, on the assumption that consumers infer quality estimates in a piecemeal way, future research may want to consider the categorization approach more frequently. There are a number of reasons for this. First, consumers use cues to categorize products before any more elaborate inferential activity may occur (Bruner, 1957). Second, categories cover quality and cost information on all salient product dimensions. Third, category membership seems at least equally important in purchase decision making. Consequently, more knowledge is needed on which cues signal category membership (prototypicality value) as opposed to which cues signal product quality (predictive value) or self-confidence (confidence value). Preferably, these cue values should be measured using a similar methodology, making these values more comparable and the application of cues in management more effective. Whereas predictive value is usually measured by inquiring about the extent to which the consumer believes a cue is associated with the product quality, prototypicality value has often been measured by computing the relative number of subjects who have listed a certain attribute as a characteristic for a certain product category (see Yi and Gray, 1996). As consumers may find it very difficult to assess the cue - quality or cue - category membership associations for each cue separately, our approach, in which cue values are decomposed from the respondent's assessments of a set of multi-attribute alternatives, may be regarded as a first step in developing comparable measures for these cue values. A decompositional approach also seems preferable when interaction effects may be present. Future research may also want to explore possible assimilation and contrast effects occurring when a cue is category-incongruent with the other cues offered by a brand (see Appendix 7B) or when conjunction categories exist (Lee and Ulgado, 1994). It might also be interesting to know to what extent the particular cue values have an effect on these processes.

Finally, whereas our research concerned the effect of usage situation and expertise on experience-based norms, future research may want to explore the effect of other determinants. Many determinants have been suggested in the literature but very little empirical evidence is available. More research is also needed on subjective norms and consumer benefits, and what makes them required and selective. As such, it might be relevant to study the impact of the availability and the variability of service alternatives, and the impact of emergency and recovery situations in purchase decision making.

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Subject index

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Samenvatting (Dutch Summary)

Sinds een tiental jaren is er bijzonder veel aandacht rondom dienstenkwaliteit. Een overweldigend aantal publikaties en conferenties zijn aan dit onderwerp besteed. Diverse studies hebben aangetoond dat een hogere kwaliteit resulteert in een hogere omzet, winst en marktaandeel. Andere studies hebben laten zien dat kwaliteit een belangrijke factor is in het bereiken van klantentevredenheid en klantenloyaliteit. Met name is veel kennis ontwikkeld omtrent het meten van dienstenkwaliteit en het managen van dienstenprestaties. Ondanks dat dienstenkwaliteit vaak wordt gedefinieerd als het verschil tussen de ervaren en de verwachte prestatie, is heel weinig onderzoek beschikbaar naar de verwachtingscomponent binnen deze definitie. Het beschikbare onderzoek richt zich daarbij vrijwel uitsluitend op retrospectieve verwachtingen, bedoeld om de kwaliteit van een dienst na aanschaf en consumptie te beoordelen. De gedachte dat kwaliteitsverwachtingen ook bij de aanschaf van diensten van belang zijn, is in de literatuur nog nauwelijks onderkend.

Het doel van deze dissertatie is dan ook te onderzoeken op welke wijze kwaliteitsverwachtingen bij diensten tot stand komen en te onderzoeken hoe managers hierop invloed kunnen uitoefenen bij aankoopbeslissingen van consumenten.

Alvorens te onderzoeken hoe deze verwachtingen tot stand komen en beïnvloed kunnen worden, is onderzocht wat nu precies onder dienstenkwaliteit en kwaliteitsverwachtingen wordt verstaan. Dit is nodig omdat een conceptualisatie van deze begrippen in de literatuur nog nauwelijks heeft plaatsgevonden. Dit kan inhouden dat consumenten en onderzoekers deze begrippen verschillend hebben geïnterpreteerd, hetgeen zijn effect heeft op de waarde van bestaand onderzoek. Om een betere conceptualisatie mogelijk te maken is bekeken hoe dienstenkwaliteit zich verhoudt tot andere aankoopgerelateerde begrippen zoals klantentevredenheid, produktwaarde en -attitude. Een zestal dimensies uit de consumenten gedragsliteratuur is geselecteerd om conceptuele verschillen en overeenkomsten op te sporen. (1) De basisdimensie richt zich op de vraag of het begrip betrekking heeft op datgene wat de consument ontvangt van de dienstverlener, of dat daarbij ook tegenprestaties (geld en moeite) worden meegewogen. (2) De tijdsdimensie heeft betrekking op de vraag of het begrip bestemd is voor aankoopbeslissingen (voor de koop) of voor aankoopevaluaties (na de koop). (3) De objectdimensie

beschouwt of het begrip iets zegt over de consument of iets over het produkt. (4) De inhoudsdimensie wordt gebruikt om duidelijk te maken of alleen cognitieve, of ook affectieve en eventuele conatieve aspecten inherent zijn aan het begrip. (5) De contextdimensie richt zich op de vraag of het begrip een absoluut of een relatief oordeel is. (6) De aggregatiedimensie, tenslotte, geeft uitsluitsel of het begrip de beoordeling van een enkele transactie of van een relatie weerspiegelt. Aan de hand van deze dimensies is de literatuur omtrent gepercipieerde dienstenkwaliteit, gepercipieerde produktwaarde, klantentevredenheid en produktattitude geëvalueerd om te onderzoeken in hoeverre er reeds, weliswaar impliciete, wetenschappelijke consistentie en consensus bestaat. De resultaten hiervan wijzen uit dat onderzoekers de begrippen op sommige dimensies (b.v. de basisdimensie) op een vrij eenduidige manier hebben benaderd, maar dat op andere dimensies (b.v. de aggregatiedimensie) verschillende invullingen zijn gegeven aan hetzelfde begrip. Toch lijkt een afbakening van het begrip dienstenkwaliteit mogelijk als zijnde een relatief, cognitief, produkt gerelateerde, aankoopevaluatie van ontvangen dienstverlening welke zowel betrekking kan hebben op een specifieke transactie als op een continue relatie met de dienstverlener. Soortgelijke conceptuele afbakeningen hebben plaatsgevonden voor de andere begrippen. Door gebruik te maken van dezelfde dimensies werd het mogelijk om conceptuele relaties tussen de begrippen onderling vast te leggen. Hierdoor ontstaat inzicht in de wijze waarop bijvoorbeeld een abstracter begrip zoals bijvoorbeeld klantentevredenheid kan worden aangestuurd via het meer toegankelijker begrip dienstenkwaliteit.

Deze conceptuele benadering maakte het eveneens mogelijk om meer betekenis toe te kennen aan kwaliteitsverwachtingen. In de literatuur zijn diverse typen verwachtingen gespecificeerd welke consumenten tegelijkertijd kunnen vormen in aankoopprocessen. Sommige van deze verwachtingen hebben het karakter van voorspellingen, andere lijken meer op normen. Terwijl voorspelverwachtingen betrekking hebben op de inschatting dat iets zal gebeuren, hebben normverwachtingen betrekking op de wens dat iets zal gebeuren. Een verder onderscheid betreft dat tussen subjectieve normen en ervaringsnormen. De eerstgenoemde normen hebben betrekking op specifieke consumentenbehoeften. De laatstgenoemde normen zijn bepaald op basis van ervaringen met soortgelijke produkten in het verleden. Bestudering van de literatuur laat zien dat met name subjectieve normen zijn gebruikt in onderzoek naar dienstenkwaliteit. Dit is merkwaardig aangezien deze normen meer consument- dan produktgerelateerd zijn en dat hierin naast cognitieve ook affectieve aspecten een belangrijke rol spelen. Gegeven dat ervaringsnormen veel beter corresponderen met de conceptuele karakteristieken

van dienstenkwaliteit, is voorgesteld om in toekomstig onderzoek dit type normen te gebruiken. Deze ervaringsnormen zijn van belang bij zowel aankoopbeslissingen als bij aankoopevaluaties door consumenten. Bij aankoopbeslissingen kunnen deze normen worden gebruikt als referentiekader om de voorspellingen van merkprestaties te beoordelen en het beste merk te selecteren. Bij aankoopevaluaties kunnen ze gebruikt worden als referentiekader voor ervaren merkprestaties en om te komen tot een uiteindelijk kwaliteitsoordeel.

Na deze conceptuele studies zijn vier empirische studies verricht met als doel kennis te ontwikkelen omtrent de wijze waarop consumenten kwaliteitsvoorspellingen en kwaliteitsnormen vormen bij de aanschaf van diensten. De invalshoek is om deze kennis te gebruiken ten behoeve van het managen van kwaliteitsverwachtingen.

Gegeven dit management perspectief, is vooral ingegaan op de wijze waarop kwaliteitsindicatoren zoals de merknaam en het interieur worden gebruikt om kwaliteitsvoorspellingen te kunnen maken. Deze indicatoren zijn vaak produkt gerelateerd en kunnen beter aangestuurd worden dan andere informatiebronnen zoals bijvoorbeeld mond-tot-mond reclame. Alhoewel reeds vrij veel onderzoek rondom het gebruik van kwaliteitsindicatoren voorhanden is, heeft het merendeel betrekking op de kwaliteitsvoorspellingen ten aanzien van goederen. Dienstenkarakteristieken zoals ontastbaarheid, heterogeniteit en vergankelijkheid zorgen er echter voor dat veel minder kwaliteitsindicatoren beschikbaar zijn. Ook is het bij diensten moeilijker om kwaliteitsvoorspellingen te vormen en hebben consumenten er vaak minder vertrouwen in. Het gevolg is dat consumenten op een veel minder nauwkeurige en systematische wijze de kwaliteit (kunnen) voorspellen dan vaak bij goederen wordt aangenomen. Hierdoor zullen indicatoren die de vorming van kwaliteitsvoorspellingen vergemakkelijken en versnellen, of het vertrouwen in deze voorspellingen vergroten door consumenten worden geprefereerd. Het hier gepresenteerde onderzoek naar het gebruik en het effect van specifieke indicatoren bij het maken van kwaliteitsvoorspellingen is dan ook hierop afgestemd. Daarnaast is bestudeerd hoe kwaliteitsnormen door consumenten worden gecategoriseerd en is onderzoek gedaan naar conditionele factoren die het gebruik van deze normen bij aankoopbeslissingen bepalen.

De eerste studie is een exploratief onderzoek naar het gebruik van kwaliteitsindicatoren door dienstverleners en de interpretatie ervan door consumenten. Specifiek is het gebruik en de interpretatie van kwaliteitskeurmerken onderzocht. Aangezien

kwaliteitskeurmerken objectieve, beknopte en reeds geëvalueerde produktinformatie verschaffen, lijken ze een geschikte indicator voor het maken van kwaliteitsvoorspellingen. Vooral bij het voorspellen van kwaliteitsdimensies als betrouwbaarheid en veiligheid lijken keurmerken waardevolle informatie te kunnen bieden aangezien deze dimensies veel minder goed door de consument persoonlijk te beoordelen zijn. Een kwantitatief onderzoek onder consumenten van hotel- en restaurantdiensten toont aan dat keurmerken inderdaad worden geprefereerd bij diensten waar deze dimensies moeilijk op een andere manier te verifiëren zijn. Veelal zijn consumenten ook in de veronderstelling dat een keurmerkverlenende instantie diensten op deze moeilijk grijpbare dimensies certificeert. Een analyse van waarop deze instanties dienstverleners daadwerkelijk certificeren toont echter aan dat veel keurmerken juist deze dimensies niet in het evaluatieproces betrekken. Merkwaardig genoeg maken kwaliteitsdimensies zoals tastbaarheden en toegankelijkheid vaak wel deel uit van het certificeringsproces, terwijl deze dimensies ook vrij gemakkelijk door de consument zelf zijn vast te stellen. Blijkbaar heeft de consument die afgaat op keurmerken er totaal geen idee van wat het keurmerk eigenlijk certificeert en impliceert. Geconcludeerd is dat dienstverlenende organisaties zeer zorgvuldig met keurmerken moeten omgaan aangezien serieuze verschillen kunnen ontstaan tussen kwaliteitsverwachtingen en kwaliteitsprestaties veroorzaakt door hun gebruik.

In de tweede studie is het effect van industrialisering van diensten op kwaliteitsvoorspellingen onderzocht. Aangezien dienstenindustrialisatie betrekking heeft op hetzij de vervanging van mensen door machines, hetzij het standaardiseren van produktieprocessen, mag verwacht worden dat tevens de (gepercipieerde) heterogeniteit van de dienstenkwaliteit zal afnemen. Om dit tot uitdrukking te brengen, is een nadrukkelijk onderscheid gemaakt tussen het voorspelde niveau van de dienstverlening en de voorspelde variabiliteit van de dienstverlening. Tevens is onderzocht hoe het effect van deze verwachtingscomponenten op aankoopintentie wordt beïnvloed door situationele factoren. In een conjunct experiment zijn twee typen kwaliteitsindicatoren gemanipuleerd. Het hebben van een saladebar, een balie waar menu's kunnen worden besteld, en aanwijzingen dat na gebruik van de maaltijd de klant zelf de tafel moet afruimen geven industrialisatie van intrinsieke dienstverleningsaspecten van een restaurant aan. Geüniformeerd personeel en het met behulp van een kassaregister maken van de rekening hebben betrekking op de industrialisatie van extrinsieke aspecten. Door consumenten diverse combinaties van al dan niet geïndustrialiseerde kwaliteitsindicatoren te laten beoordelen, is vast komen te staan dat bij het industrialiseren van extrinsieke dienstenindicato-

ren het voorspelde kwaliteitsniveau toeneemt terwijl de voorspelde kwaliteitsvariabiliteit van het restaurant afneemt. Industrialisatie van intrinsieke indicatoren daarentegen, resulteert in een afname van het voorspelde kwaliteitsniveau. Een mogelijke verklaring is dat deze indicatoren door consumenten worden gezien als typische kenmerken van een fast-food restaurant, en de daarbij behorende (lagere) kwaliteitsniveaus direct doorvertalen naar zo'n restaurant. Verder blijkt uit het onderzoek dat een hoger voorspeld kwaliteitsniveau niet altijd wordt geprefereerd maar dat consumenten soms een lager niveau verkiezen. Zo prefereert een consument die een restaurant bezoekt zonder gezelschap en weinig tijd heeft om de maaltijd te gebruiken een lager voorspeld kwaliteitsniveau, en hecht deze consument meer waarde aan een lagere voorspelde kwaliteitsvariabiliteit. Blijkbaar beinvloedt de consumptiesituatie de kwaliteitsnormen waarmee de kwaliteitsvoorspellingen worden vergeleken.

In de derde studie is de invloed van de consumptiesituatie en expertise op de selectie van kwaliteitsnormen onderzocht. Aangezien deze ervaringsnormen vaak in het geheugen zijn opgeslagen in dienstencategorieën, heeft een kwantitatief onderzoek plaatsgevonden onder bezoekers van vijf verschillende categorieën restaurants. Deze categorieën waren: fast-food restaurants, lunchrooms, wegrestaurants, bistro's en exclusieve restaurants. Vastgesteld is dat consumenten de kwaliteit van restaurants op zeven verschillende dimensies beoordelen: empathie, atmosfeer, professionaliteit, betrouwbaarheid, omgeving, privacy en toegankelijkheid. Toetsing toont aan dat deze dimensies generiek toepasbaar zijn voor elke categorie. De kwaliteitsnormen op deze dimensies daarentegen, zijn uniek voor elke categorie. Ook blijken deze ervaringsnormen in grote mate met elkaar samen te hangen per categorie. Zo blijkt dat een hoge norm op professionaliteit samenhangt met een hoge norm op empathie en een lage norm op toegankelijkheid. Uit het onderzoek komt naar voren dat vooral de consumptiesituatie de keuze van de kwaliteitsnormen bepaalt. Meer specifiek blijken consumptiesituaties waarin interne consumptie motieven (b.v. tijd en geld willen besteden) een rol spelen, het grootste effect te hebben. Expertise heeft alleen een effect wanneer externe consumptie motieven (b.v. indruk willen maken op anderen) een rol spelen, en dan alleen op sociaal getinte kwaliteitsdimensies zoals restaurant atmosfeer en omgeving. Een implicatie is dat managers die zich bijvoorbeeld willen richten op zakendiners, specifiek aandacht moeten besteden aan uiterlijkheden, terwijl dit bij andere diner gelegenheden veel minder relevant is. De promotiecampagne van McDonalds een aantal jaren geleden om ook zakenlunches aan te trekken was dan ook gedoemd te mislukken aangezien alleen al de naam

McDonalds prototypisch lijkt voor een fast-food restaurant met de daarbij behorende kwalificaties.

In de vierde studie is het effect van prototypische dienstenindicatoren onderzocht. Doordat prototypische diensten een goede (marktconforme) prijs - kwaliteit verhouding bieden en consumenten op basis van ervaring hebben geleerd dat deze diensten geschikt zijn om specifieke consumptiedoelen te realiseren, worden ze door consumenten vaak geselecteerd. Daarbij wordt de reeds in het geheugen aanwezige categorie-informatie direct doorvertaald naar diensten die prototypisch lijken en wordt een gedetailleerde kwaliteitsvoorspelling overbodig. Door middel van een conjunct experiment is vastgesteld dat de voor prototypische diensten gemaakte voorspellingen ook met meer (zelf)vertrouwen tot stand komen en dat prototypicaliteit belangrijker is dan kwaliteit bij het nemen van aankoopbeslissingen. Gegeven dat prototypische diensten door consumenten worden gewaardeerd omdat ze tot effectieve en efficiënte beslissingen leiden, is onderzocht welke indicatoren prototypisch zijn en wat hun diagnostische waarde is. Deze diagnostische waarde is uiteengerafeld in de mate waarin een indicator informatie verschaft bij de voorspelling van de kwaliteit(sdimensies), de kosten, de categorie en de aankoopintentie. Specifiek is onderzocht in welke mate verschillende dienstenindicatoren hierin verschillen en is vastgesteld hoe deze diagnostische waarden met elkaar worden geassocieerd. De gemanipuleerde indicatoren waren de merknaam (Sinjoor en Valentijn), de kleding van bezoekers (vrijetijds- en uitgaanskleding), het interieur van het restaurant (tafels met placemats en linnengedekt) en het keurmerk (ANWB 3 sterren en Meesterkok). Bistro's en exclusieve restaurants waren geselecteerd als restaurant categorieën en de aankoopintenties waren gericht op een diner met vrienden en een diner met zakenrelaties. De resultaten tonen aan dat keurmerken de beste kwaliteitsinformatie verschaffen. Interieur daarentegen is het meest indicatief voor het bepalen van de restaurantcategorie en is daarmee de meest prototypische indicator. Dit houdt in dat wanneer een consument placemats op de tafels ziet liggen, het volgens hem vrijwel uitgesloten is dat het restaurant een exclusief restaurant betreft. Tevens is gevonden dat prototypische indicatoren produktinformatie geven over alle produktdimensies en dat ze meer impact hebben op de aankoopintentie van consumenten dan kwaliteitsindicatoren. Een belangrijke implicatie is dat managers moeten zorgen voor een consistente inzet van prototypische dienstenindicatoren en daarmee categorieconforme kwaliteits- en kostenvoorspellingen op alle dimensies creëren. Wanneer dienstenindicatoren uit twee verschillende categorieën worden gebruikt, leidt dat mogelijk tot een hoge mate van onzekerheid over de prijs - kwaliteitsverhouding en over

de vraag of gestelde aankoopdoelen wel gerealiseerd zullen worden wanneer deze dienst zou worden aangeschaft. Niet-prototypische dienstenkenmerken kunnen worden gebruikt om extra accenten te leggen op specifieke dimensies zonder dat ook de categoriespecifieke kwaliteitsnormen worden verhoogd door de consument, waaraan de dienstverlener tegemoet zal moeten komen.

Whereas most service quality research has addressed quality performances, this dissertation research focuses on quality expectations. In particular, the assessment of quality estimates and quality norms in purchase decision making has been studied from a management perspective. Two conceptual studies elaborate on the exact meaning of service quality and service quality expectations. Four empirical studies examine the use of service cues in quality estimation, and the effect of usage situation and consumer expertise on quality norms. The studies were conducted in a restaurant context. Implications for service quality management are discussed.

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